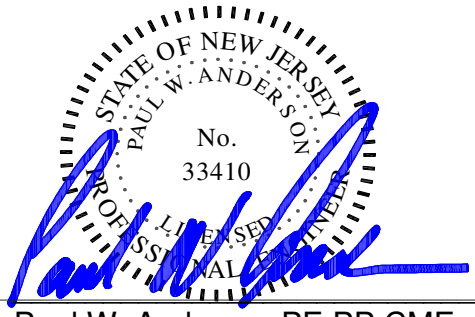
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Stormwater Management Report
(formerly Drainage Report)
West Essex Highlands
Block 179, Lot 32
West Orange NJ

March 12, 2023
Rev 1 April 27, 2023
Rev Sept 7, 2023
Rev Oct 3, 2023
Rev October 24, 2023
Rev 10-30-23
Rev 6-24-24



Paul W. Anderson PE PP CME
NJ PE Lic. No. 33410

DocuSigned by:
Paul Anderson
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Point of Analysis 3
- Existing
- Proposed

Conclusion

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Appendix

- Drainage area maps

Hydrocad Output PA-1

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- Basin 11

- Groundwater Mounding Analysis
- Recharge Spreadsheet
- Theissens Polygon soil type analysis
- Pipe sizing calculations
- Riprap sizing calculations

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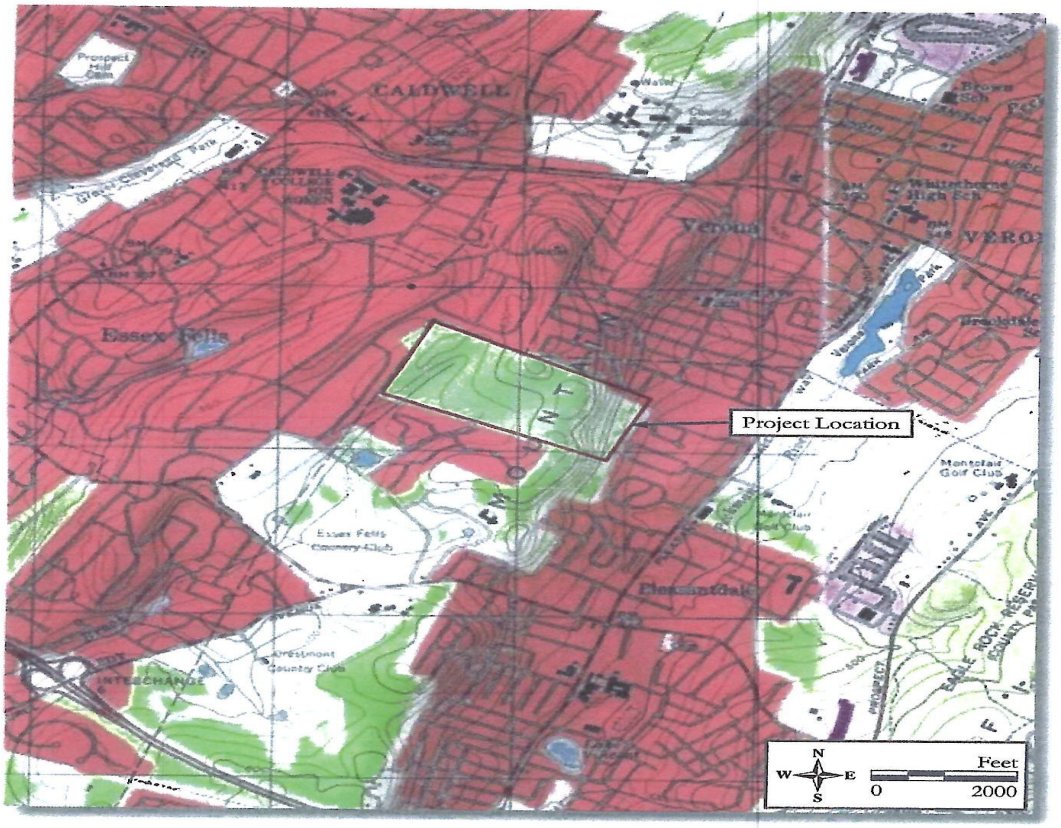


Figure 1.1: U.S.G.S. Map
(from 1995 U.S.G.S. 7.5' Quadrangle: Caldwell, NJ).

1-2

Location Map

1

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Introduction

The West Essex Highlands property has been designated as the location for multifamily housing as part of a court approved settlement agreement which is part of the affordable housing requirements for the Township of West Orange. Part of the Settlement Agreement provides that disturbance on the 120-acre parcel is limited to 30 acres leaving the remainder as open space to be utilized as passive recreation in its natural condition.

The initial submittal to NJDEP relied heavily on three stormwater basins in the southern area of the property where deeper soil and seasonal high ground water prevailed. Reviews of this submission and subsequent modifications to it found that the NJDEP preferred a design that managed stormwater more broadly over the entire site.

Several video conferences were held with NJDEP to review in more detail the existing site soil conditions, the overall soil testing that had been performed to date and to develop a conceptual plan for the re-design of the stormwater management system with stormwater managed neared to it source. The concept plan required new soil testing within the approved soil testing window to establish the seasonal high-water table at each proposed stormwater system.

The testing resulted in areas with high water tables, shallow bedrock and poor soil permeability in many of the tested areas. As a result, the site grading design was raised to achieve a greater distance to groundwater and bedrock and soil replacement was used to address permeability issues. A video conference was held with NJDEP to review the new concept and the consensus was to proceed to full design of the new concept.

Previous soil testing results reviewed by the NJDEP have resulted in the designation of some areas of the project as type D soils. Thiessens Polygon Method has been utilized to determine the limits of the D soils. The plan showing this analysis is included in the Appendix.

The project design includes a stormwater management design in accordance with the concept plan review with NJDEP. It meets state stormwater standards for water quality, groundwater recharge and discharge rate. The drainage design has a combination of small-scale infiltration basins, porous pavement systems and a large scale infiltration basin. The systems have been located throughout the disturbed area to manage the stormwater near its source.

The calculations utilize Hydrocad, version 9.10, NJDEP approved intensity curves, and the SCS TR-20 methodology to calculate the pre-and post-development runoff.

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Methodology
The drainage for the development area of the property is calculated for the existing and proposed conditions for each of the three Points of Analysis. The proposed analysis is broken down into the overall un-detained in the analysis area and the flow to each of the stormwater management systems.

The existing conditions for the site are considered wooded in good conditions per NJDEP guidance documents. Discharge rates for the existing conditions under the 2, 10 and 100-year storm events are calculated with The Hydrocad drainage program and the SCS TR-20 method. Hydrographs for the proposed conditions for areas detained and un-detained are developed. Allowable discharge rates for the detention system are calculated and the proposed hydrograph is routed through a proposed detention system until the desired discharge rate is achieved for each storm.

Discussion

Water Quality
Each Drainage basin uses green technology to achieve the require 80% suspended solid removal rate. Small-scale infiltration basins are paired with a pre-treatment separator to achieve 90% removal rate. Chaptrer 9.8 permits non-GI Approved MTD's to be used as pre-treatment as noted on page 10. " Pretreatment may consist of a forebay or an BMPs found in chapter 9 or 11". Porous pavement systems remove 80% per the BMP manual. The large-scale basin utilizes a green technology approved MTD (filterra) at its inlets to achieve the water quality requirement.

Water Quantity
The stormwater system proposed has been designed to reduce the discharge from the site for the 2-, 10- and 100-year storms as required by the stormwater regulations. Each of the drainage/detention areas has been designed to control stormwater to below its current discharge rate. The results of the stormwater analysis for existing and proposed discharge are provided in the summary tables for each point of analysis. Detailed Hydrocad output is also included in the appendix of this report.

Point of Analysis 1 (POA#1)

PA#1 is the area of the site that drains to the Canoe Brook in the western portion of the property. The stormwater management systems designed for this are Large Scale Basin #1, and porous pavement systems 5&6.

POA#1 (Point of Analysis) Existing Conditions
Tc Computations.
This drainage area is in a forested cover with very light underbrush due to deer over browsing. The path of the existing conditions Tc is shown on the
Existing Conditions Drainage Area Map. The Tc (Time of Concentration) is calculated in the Hydrocad program with the factors shown on the map and is as follows.

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The Basin 1 contributing area is 414691 sf of Woods in good condition.
The initial 100 lf (linear feet) is sheet flow with a slope of 5% in woods with light underbrush. Tc=14.3 min
The next segment is shallow concentrated flow 1980 lf with a slope of 5.4% through woods with light underbrush. There is no discernable channel in the field along this path that would change the categorization of the flow type. Tc = 8.8 min.
Total pre-development Tc= 23.1 minutes

Large Scale Infiltration Basin #1

This stormwater system collects water from Kusik Drive and the lawn areas adjacent. The total contributory area outside the basin itself is 2.5 acres but when the basin area is included the total drainage area is 3.49 Acres.

The proposed Tc for the area flowing to Detention 1 uses the following input
Sheet flow 59 lf @2% over grass Tc= 9 minutes
Shallow concentrated flow 425 lf over pavement @ 6.5% Tc = 1.7 minutes
Pipe flow 425 lf pipe , 2.5 fps Tc = 3.4 minutes
Total Tc = 14.1 minutes

Basin 1 is designed as a large scale basin without exfiltration as an outlet. The Basin details do include soil replacement with a permeable sand to allow infiltration to occur.

Water quality is achieved with MTD's at each inlet location.

Porous Pavement system #5

Porous pavement #5 collects stormwater from the Building B parking lot, Building B roof and grass areas around the building. The total drainage area is 1.07 acres with the majority of that area the building roof or the porous pavement surface. The ratio of other contributing areas to the Porous pavement area is .4 : 1
The system will have soil replacement with a permeability of 4 inches per hour with a factor of safety of 2.

The proposed Tc for the area flowing to PP5 uses the following input
Sheet flow 40 lf @2% over pavement Tc= .6 minutes
Pipe flow 182 lf pipe , 2.5 fps Tc = 1.2 minutes
Total Tc = 1.8 minutes
The porous pavement system is considered green technology for both groundwater recharge and water quality.

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Porous Pavement system #6

Porous pavement #6 collects stormwater from the parking lot between Buildings B and C, Building C roof and grass areas around the building. The majority of the drainage area is the building roof or the porous pavement surface. The ratio of other contributing areas to the Porous pavement area is 1.9 : 1

The system will have soil replacement with a permeability of 4 inches per hour with a factor of safety of 2.

The proposed Tc for the area flowing to PP6 uses the following input
Sheet flow 40 lf @2% over pavement Tc= .6 minutes
Pipe flow 450 lf pipe , 2.5 fps Tc = 3 minutes
Total Tc = 3.6 minutes

The porous pavement system is considered green technology for both groundwater recharge and water quality.

PA-1 Discharge Summary

STORM	EXISTING	PERMITTED	#1	#5	#6	OVERLAND FLOW	POA 1
WQ			0	0	0	.42	.42
2 YR	6.84	3.43	.19	0	.22	2.46	2.46
10 YR	15.78	11.5	.60	1.06	2.63	5.01	5.08
100 YR	35.37	28.3	1.18	4.67	11.67	10.26	10.89

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Point of Analysis 2

This drainage area discharges to the Canoe Brook Tributary which exists at the site near the Warner Road entrance to the property. The stormwater management systems in this drainage area are small scale infiltration basins 2 , 7 & 10 and porous pavement systems 3,4, 8, &10. Each of these systems are considered green technology for quantity, quality and recharge.

POA#2 Existing Conditions
Tc Computations.
This drainage area is in a forested cover with very light underbrush due to deer over browsing. The path of the existing conditions Tc is shown on the
Existing Conditions Drainage Area Map. The Tc is calculated in the Hydrocad program with the factors shown on the map and is as follows.

The Basin 2 contributing area is 850291 sf of Woods in good condition.
The initial 100 LF is sheet flow with a slope of 4.5% in woods with light underbrush. Tc=14.9 min
The next segment is shallow concentrated flow 1740 lf with a slope of 5.9% through woods with light underbrush. There is no discernable channel in the field along this path that would change the categorization of the flow type. Tc = 7.4 minutes.

Total pre-development Tc= 22.3 minutes

Small Scale Infiltration Basin 2

This stormwater system collects water from the parking lot and grass areas behind Building A. The total contributory area is 2.49 acres. The system will have soil replacement with a permeability of 4 inches per hour with a factor of safety of 2.

The proposed Tc for the area flowing to Basin 2 uses the following input
Sheet flow 93lf @5% over grass Tc= 9 minutes
Shallow concentrated flow 370 lf over pavement @ 6.5% Tc = 1.5 minutes

Total Tc = 10.5 minutes

Basin 2 is designed as a small-scale basin with exfiltration at the rate of the replacement soil with a factor of safety of 2 as an outlet.

Pre-treatment is achieved with MTD that is approved for 50% removal prior to discharge to the basin.

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Porous Pavement #3

System 3 collects water from part of the Building A roof, the maintenance building roof, the dog kennel roof, Kennel parking lot and adjacent grass areas. The majority of the drainage area is the building roof or the porous pavement surface. The ratio of other contributing areas to the porous pavement area is 2.97: 1

The system will have soil replacement with a permeability of 4 inches per hour with a factor of safety of 2.

The proposed Tc for the area flowing to PP3 uses the following input
Sheet flow 75 lf. @ 4% over grass 8.3 minutes
Total Tc = 8.3 minutes

The porous pavement system is considered green technology for both groundwater recharge and water quality.

Porous Pavement system 4

Tc Computations

System 4 collects water from part of the Building A roof, and half of the Building A parking lot as well as adjacent grass areas. The majority of the drainage area is the building roof or the porous pavement surface. The ratio of other contributing areas to the porous pavement area is .80.
The system will have soil replacement with a permeability of 4 inches per hour with a factor of safety of 2: 1

The proposed Tc for the area flowing to PP3 uses the following input
Sheet flow 70 lf @ 2% over roof .9 minutes
Pipe flow 685 lf @ 2.5 fps 4.6 minutes
Total Tc = 5.5 minutes

The porous pavement system is considered green technology for both groundwater recharge and water quality.

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Small Scale Infiltration Basin 7

This stormwater system collects water from the parking lot and grass areas behind the clubhouse as well as Warner Road. The total contributory area is 2.45 acres. The system will have soil replacement with a permeability of 4 in/hr with a factor of safety of 2.

The proposed Tc for the area flowing to Basin 7 uses the following input
Sheet flow 83 lf @4% over grass Tc= 8.9 min
Shallow concentrated flow 277 lf over grass @ 6 % Tc = 1.1 minutes
Shallow concentrated flow 40 lf over pavement @ 6.7 % Tc =.1 minutes
Pipe Flow 365 lf @ 2.5 fps 2.4 minutes

Total Tc = 12.5 minutes

Basin 7 is designed as a small scale basin with exfiltration at the rate of the replacement soil with a factor of safety of 2 as an outlet.

Pre-treatment is achieved with MTD that is approved for 50% removal prior to discharge to the basin.

Porous Pavement system 8

Tc Computations
System 8 collects water from part of the clubhouse roof, and portions of Kusik Drive and Warner Road The ratio of non- roof contributing areas to the Porous pavement area is 2.25: 1 The system will have soil replacement with a permeability of 4 in/hr with a factor of safety of 2.

The proposed Tc for the area flowing to PP8 uses the following input
Sheet flow 100 lf @ 7% over grass 8.3 minutes
Shallow Concentrated Flow 65 lf @ 6% over grass .3 minutes
Total Tc = 8.6 minutes

The porous pavement system is considered green technology for both groundwater recharge and water quality.

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Porous Pavement system 9

Tc Computations

System 9 collects stormwater from Road D from the clubhouse area past the Bridge crossing of the stream. The ratio of contributing areas to the Porous pavement area is 2.36 : 1 The system is above natural grade and backfill will be permeable soil meeting the permeability rate of 4 inches per hour with a factor of safety of 2.

The proposed Tc for the area flowing to PP9 uses the following input
Sheet flow 100 lf @ 10% over grass 7.2 minutes
Shallow Concentrated Flow 40 lf @ 7.5% over grass .2 minutes
Total Tc = 7.4 minutes

The porous pavement system is considered green technology for both groundwater recharge and water quality.

Small Scale Infiltration Basin 10

This stormwater system collects water from the roof of building D and the the roadway/ parking area in front of Building D and some adjacent grass areas. The total contributory area is 1.88 acres. The system will have soil replacement with a permeability of 4 in/hr with a factor of safety of 2.

The proposed Tc for the area flowing to Basin 10 uses the following input
Sheet flow 59 lf @2% over grass Tc= 9 minutes
Shallow concentrated flow 210 lf over grass @ 4.8 % Tc = 1 minutes
Pipe Flow 110 lf @ 2.5 fps .7 minutes

Total Tc = 10.7 minutes

Basin 10 is designed as a small scale basin with exfiltration at the rate of the replacement soil. Exfiltration is set at the replacement soil rate.

Pre-treatment is achieved with MTD that is approved for 50% removal prior to discharge to the basin

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Porous Pavement system 11

Tc Computations

System 11 collects stormwater from Road D , half of the Building D roof and adjacent gras areas The ratio of contributing areas to the Porous pavement area is 2.97 : 1 The system will have soil replacement with a permeability rate of 4 inches per hour with a factor of safety of 2.

The proposed Tc for the area flowing to PP11 uses the following input
Sheet flow 83 lf @ 4% over grass 8.9 minutes
Shallow Concentrated Flow 150 lf @ 3.3% over grass .9 minutes
Total Tc = 9.8 minutes

The porous pavement system is considered green technology for both groundwater recharge and water quality.

PA-2 Discharge Summary

STORM	EX	PER	2	3	4	7	8	9	10	11	UD	T
WQ			0	0	0	0	0	0	0	0	3.71	3.71
2	15.19	7.6	0	.66	0	.56	.03	0	.65	.18	7.56	7.6
10	34.19	23.93	1.51	2.74	.35	2.01	.61	0	.66	2.42	13.67	19.45
100	75.56	60.4	14.43	6.36	1.01	4.01	2.90	.14	11.25	7.75	26.01	56.02

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Point of Analysis 3

Point of analysis 3 discharges to an existing drainage system in Howell Drive. This municipal system flows to the east away from the onsite streams. This drainage area is only for disturbance associated with one half of the emergency access road which will be gated closed and will have little vehicle traffic. The design achieves stormwater management standards of quantity , quality and recharge with the use of a small scale subsurface infiltration basin with soil replacement. Filterra water quality treatment devices will be provided prior to discharge to the system.

Existing Conditions are: woods with light underbrush. The existing Tc is calculated with the following factors.
70 LF. Of sheet flow @12% with woods coverage Tc= 7.6 minutes
40 lf of shallow concentrated Flow @ 12% woods cover. Tc= .4
Total Tc=8 minutes

The proposed Tc is calculated as follows:
50 lf sheet flow @ 12% grass Tc = 3.8
60 lf @ 12% grass swale Tc= .2
Total Tc = 4 minutes.

PA-3 Summary

STORM	EXISTING	PERMITTED	BASIN 12	TOTAL
2	.13	.06	0	0
10	.30	.21	0	0
100	.66	.53	0	0

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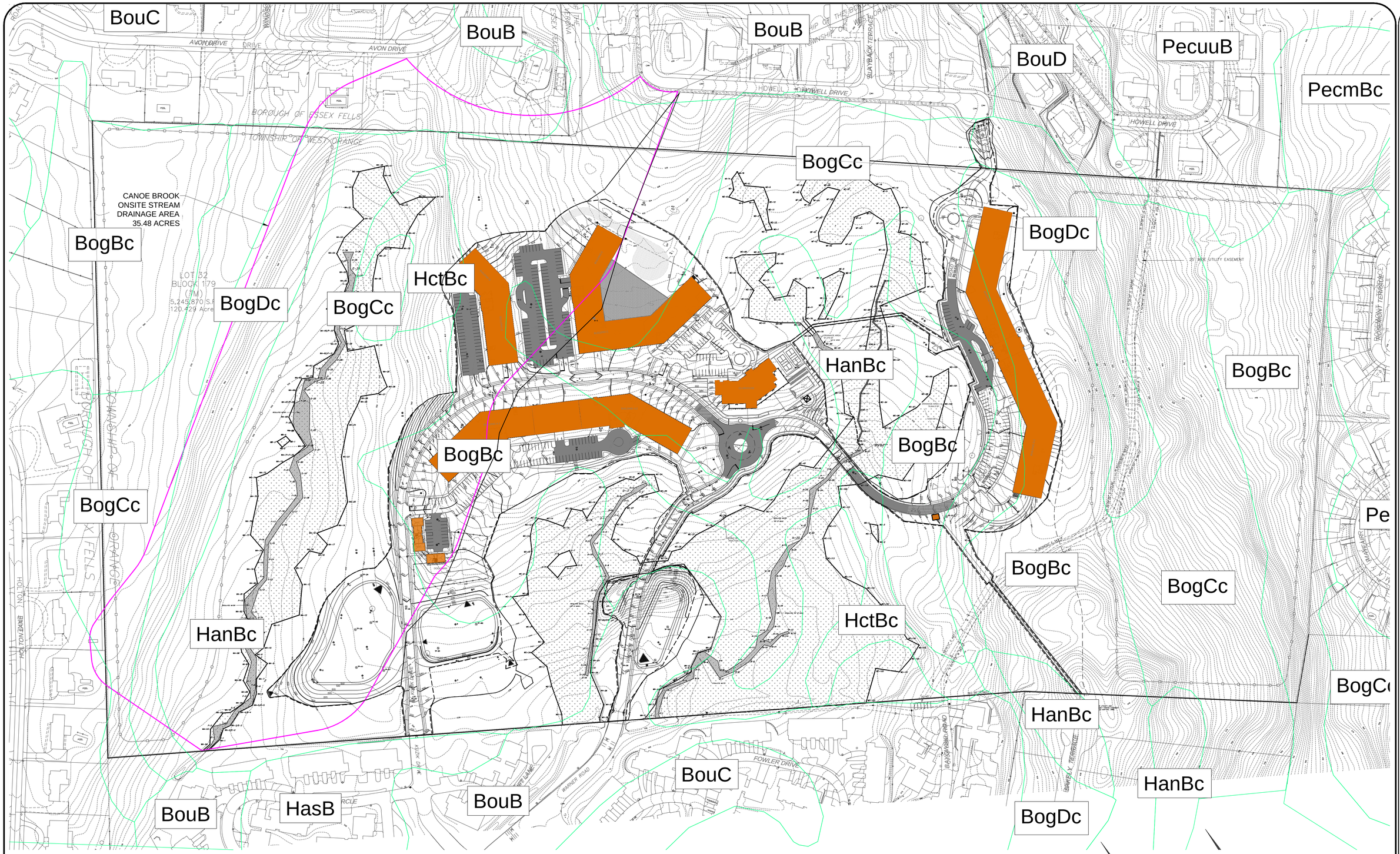
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Conclusion

The design of the West Essex Highlands Project has been completed in accordance with the court approved resolution with the limiting of the area of disturbance below 30 acres and the inclusion of environmentally friendly designs that are sensitive to the existing environmental constraints.

The stormwater design includes green technology for water quantity, quality and seeks to optimize the volume groundwater recharge with green technology. The overall discharge has been conservatively calculated for each drainage basin and overall and meet the discharge standards as required in the state standards and municipal ordinance.

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811 Know what's below. Call before you dig.

NEW JERSEY STATE LAW REQUIRES NOTIFICATION 3 BUSINESS DAYS PRIOR TO ANY LAND DISTURBANCE. CONTRACTOR IS RESPONSIBLE FOR CALLING 811 OR 1-800-272-1000 FOR UTILITY MARKOUTS. UTILITY INFORMATION SHOWN IS PROVIDED BY THE SURVEYOR AND IS CURRENT AT THE TIME OF THE SURVEY. ANDERSON CONSULTING SERVICES IS NOT RESPONSIBLE FOR THE ACCURACY OF THE DATA.

GRAPHIC SCALE

120 0 60 120 240 480

(IN FEET)
1 inch = 120 ft.

LOD: 1,212,966.7 SF
27.85 Acres

◦ - POINT OF ANALYSIS

SEABEE SURVEY

MAP REFERENCE:

1. TOPOGRAPHIC INFORMATION BASED ON SURVEY ENTITLED "TOPOGRAPHIC SURVEY OF PROPERTY" TAX LOTS 1, 2.04, & 3 - BLOCK 161 TAX LOT 3.01 - BLOCK 161, 1701-1711 ROUTE 10, TOWNSHIP OF MORRIS PLAINS, MORRIS COUNTY, NEW JERSEY" DATED 1/15/16 AND LAST REVISED 1-20-20 PREPARED BY LAKELAND SURVEYING, ROCKAWAY NJ. SIGNED BY MARC J. CIFONE, PLS
2. VERTICAL DATUM IS NAVD 1988
3. NGVD29 TO NGVD1988 = + 1.03 FT
4. FRESHWATERS WETLANDS/BOUNDARY LINE AS VERIFIED BY NJDEP FILE No. 1423-07-0001.1, FWW190001

PAUL W. ANDERSON
N.J. PROFESSIONAL ENGINEER
LIC. NO. 33415

SIGNATURE INVALID WITHOUT RAISED SEAL OF P.E.

06/24/24	REVISE FOR NJDEP SUBMISSION
04/29/24	REVISED GRADING & DRAINAGE
10/26/23	PER NJDEP COMMENTS
10/23/23	PER NJDEP COMMENTS
10/03/23	PER NJDEP COMMENTS
9/07/23	PER NJDEP WETLANDS COMMENTS
7/11/23	PER NJDEP COMMENTS
6/07/23	Revisions

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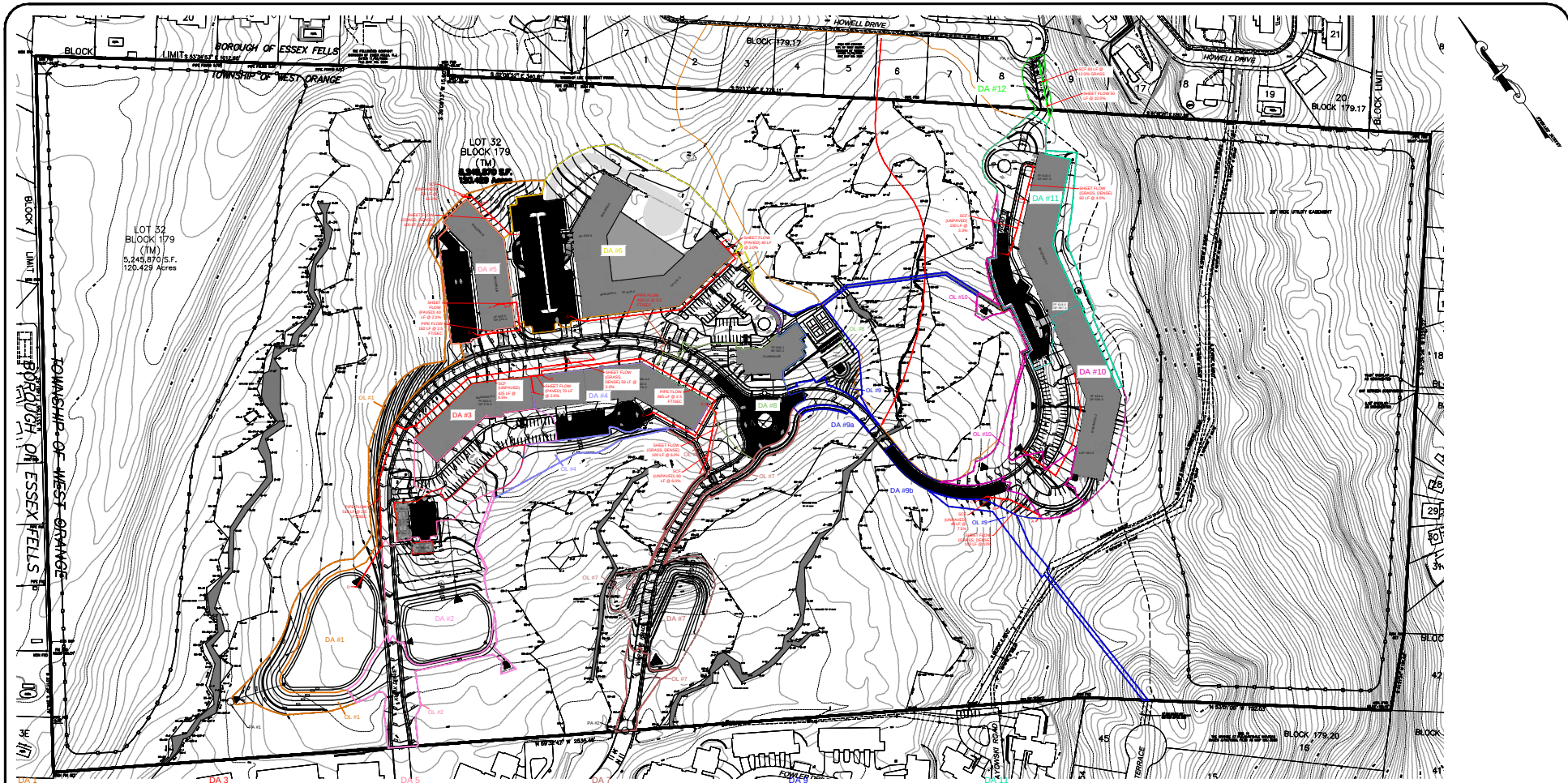
Proj. No.	WEMF-DA
Date	1-24-23
Drawn by	BCA
Designed by	PWA
Checked by	PWA
Scale	AS SHOWN

PRELIMINARY AND FINAL SITE PLAN
WEST ESSEX HIGHLANDS
BLOCK 179 LOT 32
BLOCK 179.17 LOTS 8 & 9
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

PRE-DEVELOPMENT DRAINAGE AREA

DA-O

SHEET 1 OF 7



GRAPHIC SCALE

120 0 60 120 240 480

(IN FEET)

1 inch = 120 ft.

DA 1

TOTAL:	152,076.5 SF
IMPERVIOUS:	37,372.25 SF
PERVIOUS:	114,704.25 SF
OVERLAND:	67,622.3 SF
IMPERVIOUS:	300 SF
PERVIOUS:	67,322.3 SF

1a.

DA 2

TOTAL:	108,668.8 SF
IMPERVIOUS:	30,173.4 SF
PERVIOUS:	78,495.4 SF
OVERLAND:	34,674.6 SF
IMPERVIOUS:	9,559.3 SF
PERVIOUS:	25,115.3 SF

DA 3

TOTAL:	51,670.0 SF
IMPERVIOUS:	32,428.1 SF
PERVIOUS:	19,241.9 SF
CONTRIBUTING AREA:	16,448.2 SF
POROUS PAVEMENT:	5,525 SF
ROOF AREA:	29,696.8 SF
POROUS PAVEMENT RATIO:	2.97

DA 4

TOTAL:	57,587.4 SF
IMPERVIOUS:	50,060.9 SF
PERVIOUS:	7,526.5 SF
OVERLAND:	13,831.1 SF
IMPERVIOUS:	488.0 SF
PERVIOUS:	13,343.1 SF
CONTRIBUTING AREA:	9,779.5 SF
POROUS PAVEMENT:	12,268.7 SF
ROOF AREA:	35,539.2 SF
POROUS PAVEMENT RATIO:	0.80

DA 5

TOTAL:	46,603.8 SF
IMPERVIOUS:	43,167.8 SF
PERVIOUS:	3,436.0 SF
CONTRIBUTING AREA:	5,922.0 SF
POROUS PAVEMENT:	14,590.0 SF
ROOF AREA:	26,091.8 SF
POROUS PAVEMENT RATIO:	0.40

DA 6

TOTAL:	180,291.7 SF
IMPERVIOUS:	113,831.0 SF
PERVIOUS:	66,460.7 SF
OVERLAND:	1,152.6 SF
IMPERVIOUS:	0.0 SF
PERVIOUS:	1,152.6 SF
CONTRIBUTING AREA:	70,879.7 SF
POROUS PAVEMENT:	37,197.0 SF
ROOF AREA:	72,215.0 SF
POROUS PAVEMENT RATIO:	1.91

DA 7

TOTAL:	104,455.3 SF
IMPERVIOUS:	45,777.6 SF
PERVIOUS:	58,677.7 SF
OVERLAND:	31,573.9 SF
IMPERVIOUS:	7,810.5 SF
PERVIOUS:	23,763.4 SF

DA 8

TOTAL:	62,189.0 SF
IMPERVIOUS:	39,402.7 SF
PERVIOUS:	22,786.3 SF
CONTRIBUTING AREA:	35,122.0 SF
POROUS PAVEMENT:	15,545.0 SF
ROOF AREA:	12,622.0 SF
POROUS PAVEMENT RATIO:	2.25

DA 9

TOTAL:	25,048.6 SF
IMPERVIOUS:	16,133.1 SF
PERVIOUS:	8,915.5 SF
OVERLAND:	45,727.2 SF
IMPERVIOUS:	13,686.4 SF
PERVIOUS:	32,040.8 SF
CONTRIBUTING AREA:	17,605.6 SF
POROUS PAVEMENT:	7,443.0 SF
ROOF AREA:	0.0 SF
POROUS PAVEMENT RATIO:	2.36

DA 10

TOTAL:	81,741.2 SF
IMPERVIOUS:	59,823.4 SF
PERVIOUS:	37,235.5 SF
OVERLAND:	38,275.0 SF
IMPERVIOUS:	20,969.2 SF
PERVIOUS:	17,305.8 SF
ROOF AREA:	34,451.3 SF

DA 11

TOTAL:	84,102.7 SF
IMPERVIOUS:	59,900.4 SF
PERVIOUS:	24,202.3 SF
OVERLAND:	14,579.4 SF
IMPERVIOUS:	0.0 SF
PERVIOUS:	14,579.4 SF
CONTRIBUTING AREA:	39,287.3 SF
POROUS PAVEMENT:	13,203.2 SF
ROOF AREA:	32,202.6 SF
POROUS PAVEMENT RATIO	2.97

DA 12

TOTAL:	7,751.3 SF
IMPERVIOUS:	2,500 SF
PERVIOUS:	5,251.3 SF

TOTAL UNDETAINED TO PA-1

TOTAL:	68,775.0 SF
IMPERVIOUS:	68,775.0 SF
PERVIOUS:	0.0 SF

TOTAL UNDETAINED TO PA-2

TOTAL:	177,655.5 SF
IMPERVIOUS:	125,142.1 SF
PERVIOUS:	52,513.4 SF

DA TO CULVERT

TOTAL:	573,106 SF
	13.156 Acres
PERVIOUS:	100%
Tc:	19.0 MIN

TOTAL SITE LIMIT OF DISTURBANCE 1,212,966.7 SF 27.85 Acres

811 Know what's below. Call before you dig.

NEW JERSEY STATE LAW REQUIRES NOTIFICATION 3 BUSINESS DAYS PRIOR TO ANY LAND DISTURBANCE. CONTRACTOR IS RESPONSIBLE FOR CALLING 811 OR 1-800-272-1000 FOR UTILITY MARKOUTS. UTILITY INFORMATION SHOWN IS PROVIDED BY THE SURVEYOR AND IS CURRENT AT THE TIME OF THE SURVEY. ANDERSON CONSULTING SERVICES IS NOT RESPONSIBLE FOR THE ACCURACY OF THE DATA.

PAUL W. ANDERSON
N.J. PROFESSIONAL ENGINEER
SIGNATURE INVALID UNLESS ORIGINAL SEAL OF P.E.

Revisions	
06/24/24	REVISE FOR NJDEP SUBMISSION
04/29/24	REVISED GRADING & DRAINAGE
10/26/23	PER NJDEP COMMENTS
10/16/23	PER NJDEP COMMENTS
10/03/23	PER NJDEP COMMENTS
9/07/23	PER NJDEP COMMENTS
7/11/23	PER NJDEP WETLANDS COMMENTS
6/07/23	PER NJDEP COMMENTS

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Fax: 973.975.0703
www.andersonconsult-cs.com

CERTIFICATE OF AUTHORIZATION 24GA28182400

Proj. No.	WDMF-DA
Date	1-24-23
Drawn by	BCA
Designed by	PWA
Checked by	PWA
Scale	AS SHOWN

PRELIMINARY AND FINAL SITE PLAN
WEST ESSEX HIGHLANDS
BLOCK 179 LOT 32
BLOCK 179.17 LOTS 8 & 9
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

OVERALL DRAINAGE AREA MAP

DA-2

SHEET 2 OF 7

Summary for Subcatchment 14S: Basin 1 - Imp

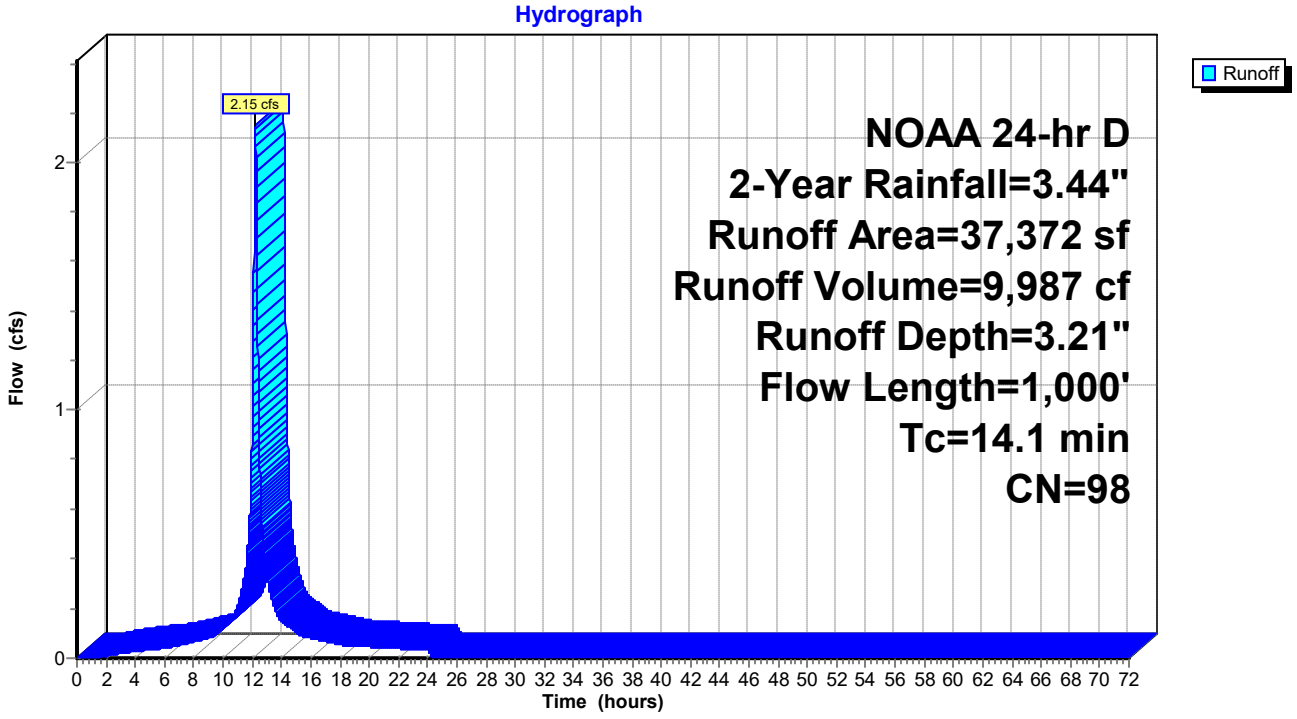
Runoff = 2.15 cfs @ 12.21 hrs, Volume= 9,987 cf, Depth= 3.21"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
8,944	98	Paved parking, HSG D
28,428	98	Paved parking, HSG C
37,372	98	Weighted Average
37,372		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 14S: Basin 1 - Imp



Hydrograph for Subcatchment 14S: Basin 1 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.01	0.01
3.00	0.13	0.03	0.02
4.00	0.18	0.06	0.03
5.00	0.24	0.09	0.03
6.00	0.29	0.14	0.04
7.00	0.36	0.20	0.05
8.00	0.45	0.27	0.07
9.00	0.55	0.36	0.08
10.00	0.68	0.49	0.12
11.00	0.89	0.69	0.21
12.00	1.65	1.43	**0.93**
13.00	2.55	2.32	**0.33**
14.00	2.76	2.53	0.15
15.00	2.89	2.66	0.10
16.00	2.99	2.76	0.08
17.00	3.08	2.85	0.07
18.00	3.15	2.91	0.06
19.00	3.20	2.97	0.05
20.00	3.26	3.03	0.05
21.00	3.31	3.08	0.04
22.00	3.36	3.12	0.04
23.00	3.40	3.17	0.04
24.00	**3.44**	**3.21**	0.03
25.00	3.44	3.21	0.00
26.00	3.44	3.21	0.00
27.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00
29.00	3.44	3.21	0.00
30.00	3.44	3.21	0.00
31.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00
33.00	3.44	3.21	0.00
34.00	3.44	3.21	0.00
35.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00
37.00	3.44	3.21	0.00
38.00	3.44	3.21	0.00
39.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00
41.00	3.44	3.21	0.00
42.00	3.44	3.21	0.00
43.00	3.44	3.21	0.00
44.00	3.44	3.21	0.00
45.00	3.44	3.21	0.00
46.00	3.44	3.21	0.00
47.00	3.44	3.21	0.00
48.00	3.44	3.21	0.00
49.00	3.44	3.21	0.00
50.00	3.44	3.21	0.00
51.00	3.44	3.21	0.00
52.00	3.44	3.21	0.00
53.00	3.44	3.21	0.00
54.00	3.44	3.21	0.00
55.00	3.44	3.21	0.00
56.00	3.44	3.21	0.00
57.00	3.44	3.21	0.00
58.00	3.44	3.21	0.00
59.00	3.44	3.21	0.00
60.00	3.44	3.21	0.00
61.00	3.44	3.21	0.00
62.00	3.44	3.21	0.00
63.00	3.44	3.21	0.00
64.00	3.44	3.21	0.00
65.00	3.44	3.21	0.00
66.00	3.44	3.21	0.00
67.00	3.44	3.21	0.00
68.00	3.44	3.21	0.00
69.00	3.44	3.21	0.00
70.00	3.44	3.21	0.00
71.00	3.44	3.21	0.00
72.00	3.44	3.21	0.00

Summary for Subcatchment 15S: Basin 1 - Perv

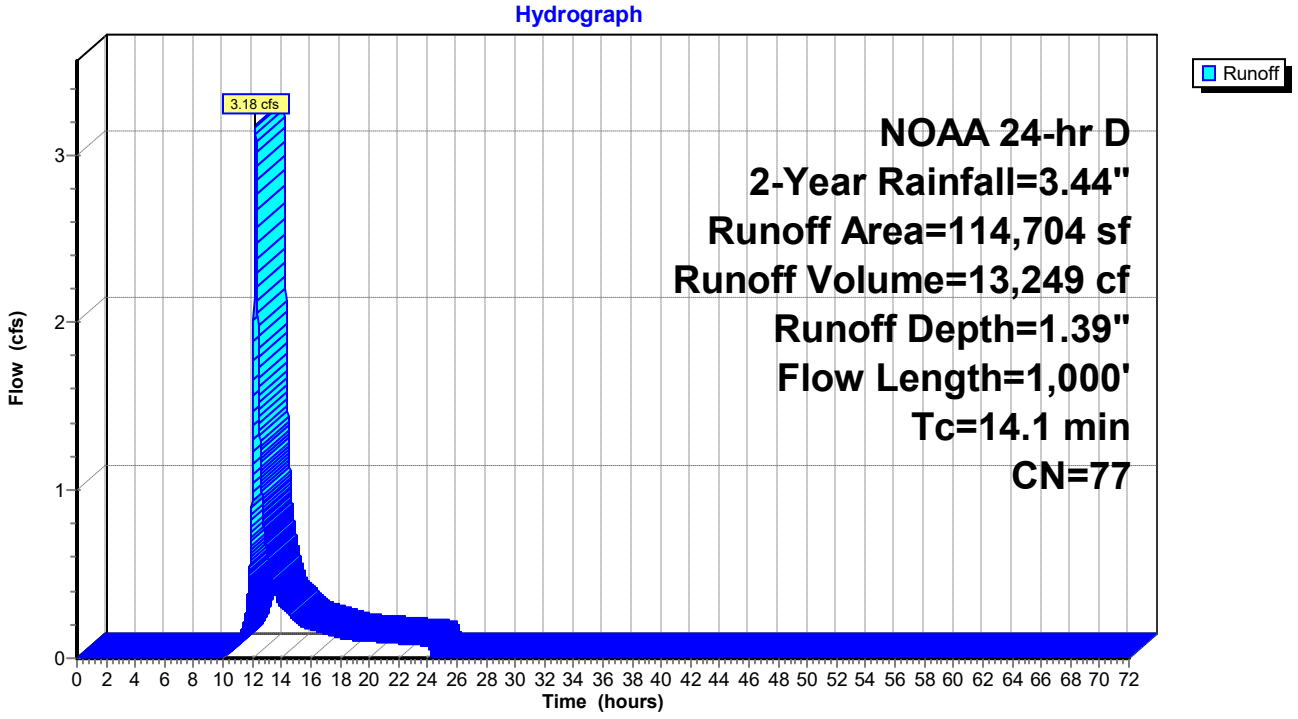
Runoff = 3.18 cfs @ 12.23 hrs, Volume= 13,249 cf, Depth= 1.39"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
65,014	80	>75% Grass cover, Good, HSG D
49,690	74	>75% Grass cover, Good, HSG C
114,704	77	Weighted Average
114,704		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 15S: Basin 1 - Perv



Hydrograph for Subcatchment 15S: Basin 1 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.13	0.00	0.00
4.00	0.18	0.00	0.00
5.00	0.24	0.00	0.00
6.00	0.29	0.00	0.00
7.00	0.36	0.00	0.00
8.00	0.45	0.00	0.00
9.00	0.55	0.00	0.00
10.00	0.68	0.00	0.01
11.00	0.89	0.03	0.10
12.00	1.65	0.27	**1.04**
13.00	2.55	0.77	**0.63**
14.00	2.76	0.91	0.31
15.00	2.89	1.00	0.22
16.00	2.99	1.07	0.17
17.00	3.08	1.13	0.15
18.00	3.15	1.17	0.12
19.00	3.20	1.22	0.11
20.00	3.26	1.25	0.10
21.00	3.31	1.29	0.10
22.00	3.36	1.33	0.09
23.00	3.40	1.36	0.08
24.00	**3.44**	**1.39**	0.07
25.00	3.44	1.39	0.00
26.00	3.44	1.39	0.00
27.00	3.44	1.39	0.00
28.00	3.44	1.39	0.00
29.00	3.44	1.39	0.00
30.00	3.44	1.39	0.00
31.00	3.44	1.39	0.00
32.00	3.44	1.39	0.00
33.00	3.44	1.39	0.00
34.00	3.44	1.39	0.00
35.00	3.44	1.39	0.00
36.00	3.44	1.39	0.00
37.00	3.44	1.39	0.00
38.00	3.44	1.39	0.00
39.00	3.44	1.39	0.00
40.00	3.44	1.39	0.00
41.00	3.44	1.39	0.00
42.00	3.44	1.39	0.00
43.00	3.44	1.39	0.00
44.00	3.44	1.39	0.00
45.00	3.44	1.39	0.00
46.00	3.44	1.39	0.00
47.00	3.44	1.39	0.00
48.00	3.44	1.39	0.00
49.00	3.44	1.39	0.00
50.00	3.44	1.39	0.00
51.00	3.44	1.39	0.00
52.00	3.44	1.39	0.00
53.00	3.44	1.39	0.00
54.00	3.44	1.39	0.00
55.00	3.44	1.39	0.00
56.00	3.44	1.39	0.00
57.00	3.44	1.39	0.00
58.00	3.44	1.39	0.00
59.00	3.44	1.39	0.00
60.00	3.44	1.39	0.00
61.00	3.44	1.39	0.00
62.00	3.44	1.39	0.00
63.00	3.44	1.39	0.00
64.00	3.44	1.39	0.00
65.00	3.44	1.39	0.00
66.00	3.44	1.39	0.00
67.00	3.44	1.39	0.00
68.00	3.44	1.39	0.00
69.00	3.44	1.39	0.00
70.00	3.44	1.39	0.00
71.00	3.44	1.39	0.00
72.00	3.44	1.39	0.00

Summary for Subcatchment 17S: Basin 5 - Imp

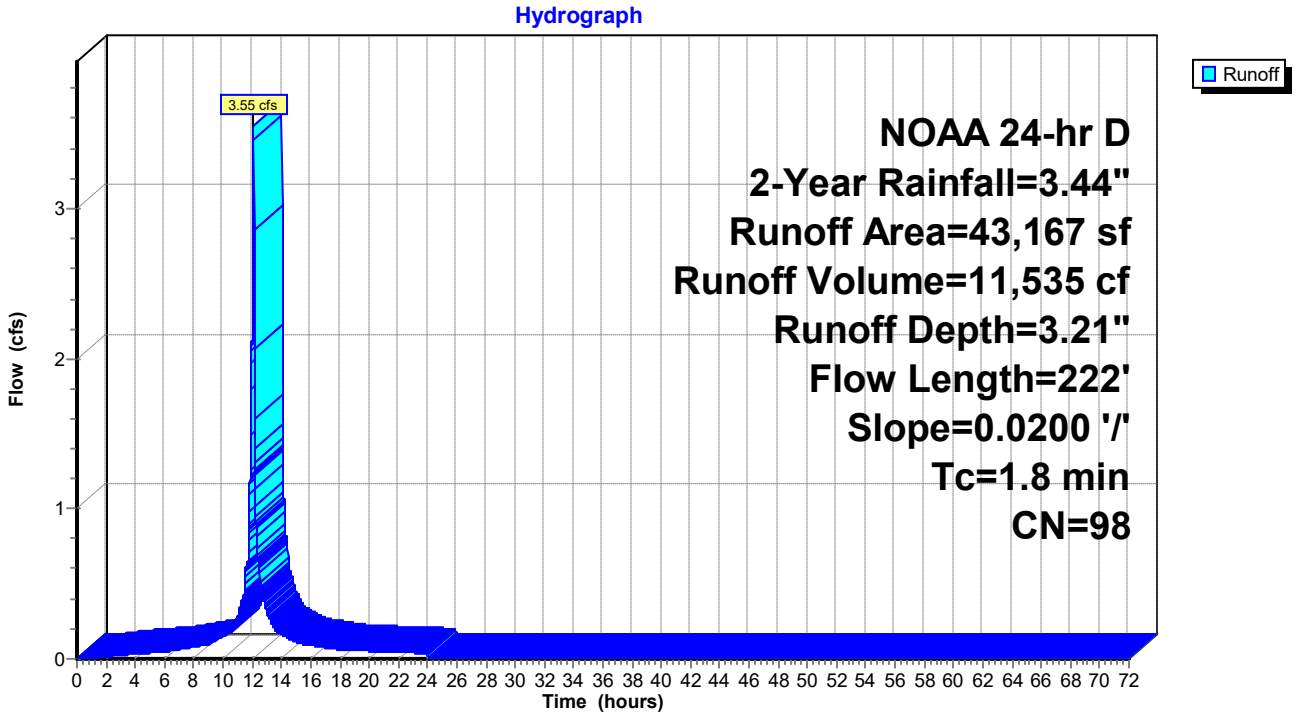
Runoff = 3.55 cfs @ 12.10 hrs, Volume= 11,535 cf, Depth= 3.21"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
26,332	98	Roofs, HSG C
16,835	98	Paved parking, HSG C
43,167	98	Weighted Average
43,167		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 17S: Basin 5 - Imp



Hydrograph for Subcatchment 17S: Basin 5 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.01	0.01
3.00	0.13	0.03	0.02
4.00	0.18	0.06	0.03
5.00	0.24	0.09	0.04
6.00	0.29	0.14	0.05
7.00	0.36	0.20	0.06
8.00	0.45	0.27	0.08
9.00	0.55	0.36	0.10
10.00	0.68	0.49	0.15
11.00	0.89	0.69	0.28
12.00	1.65	1.43	**2.12**
13.00	2.55	2.32	**0.32**
14.00	2.76	2.53	0.17
15.00	2.89	2.66	0.11
16.00	2.99	2.76	0.09
17.00	3.08	2.85	0.08
18.00	3.15	2.91	0.06
19.00	3.20	2.97	0.06
20.00	3.26	3.03	0.05
21.00	3.31	3.08	0.05
22.00	3.36	3.12	0.05
23.00	3.40	3.17	0.04
24.00	**3.44**	**3.21**	0.04
25.00	3.44	3.21	0.00
26.00	3.44	3.21	0.00
27.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00
29.00	3.44	3.21	0.00
30.00	3.44	3.21	0.00
31.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00
33.00	3.44	3.21	0.00
34.00	3.44	3.21	0.00
35.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00
37.00	3.44	3.21	0.00
38.00	3.44	3.21	0.00
39.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00
41.00	3.44	3.21	0.00
42.00	3.44	3.21	0.00
43.00	3.44	3.21	0.00
44.00	3.44	3.21	0.00
45.00	3.44	3.21	0.00
46.00	3.44	3.21	0.00
47.00	3.44	3.21	0.00
48.00	3.44	3.21	0.00
49.00	3.44	3.21	0.00
50.00	3.44	3.21	0.00
51.00	3.44	3.21	0.00
52.00	3.44	3.21	0.00
53.00	3.44	3.21	0.00
54.00	3.44	3.21	0.00
55.00	3.44	3.21	0.00
56.00	3.44	3.21	0.00
57.00	3.44	3.21	0.00
58.00	3.44	3.21	0.00
59.00	3.44	3.21	0.00
60.00	3.44	3.21	0.00
61.00	3.44	3.21	0.00
62.00	3.44	3.21	0.00
63.00	3.44	3.21	0.00
64.00	3.44	3.21	0.00
65.00	3.44	3.21	0.00
66.00	3.44	3.21	0.00
67.00	3.44	3.21	0.00
68.00	3.44	3.21	0.00
69.00	3.44	3.21	0.00
70.00	3.44	3.21	0.00
71.00	3.44	3.21	0.00
72.00	3.44	3.21	0.00

Summary for Subcatchment 22S: Basin 6 - Imp

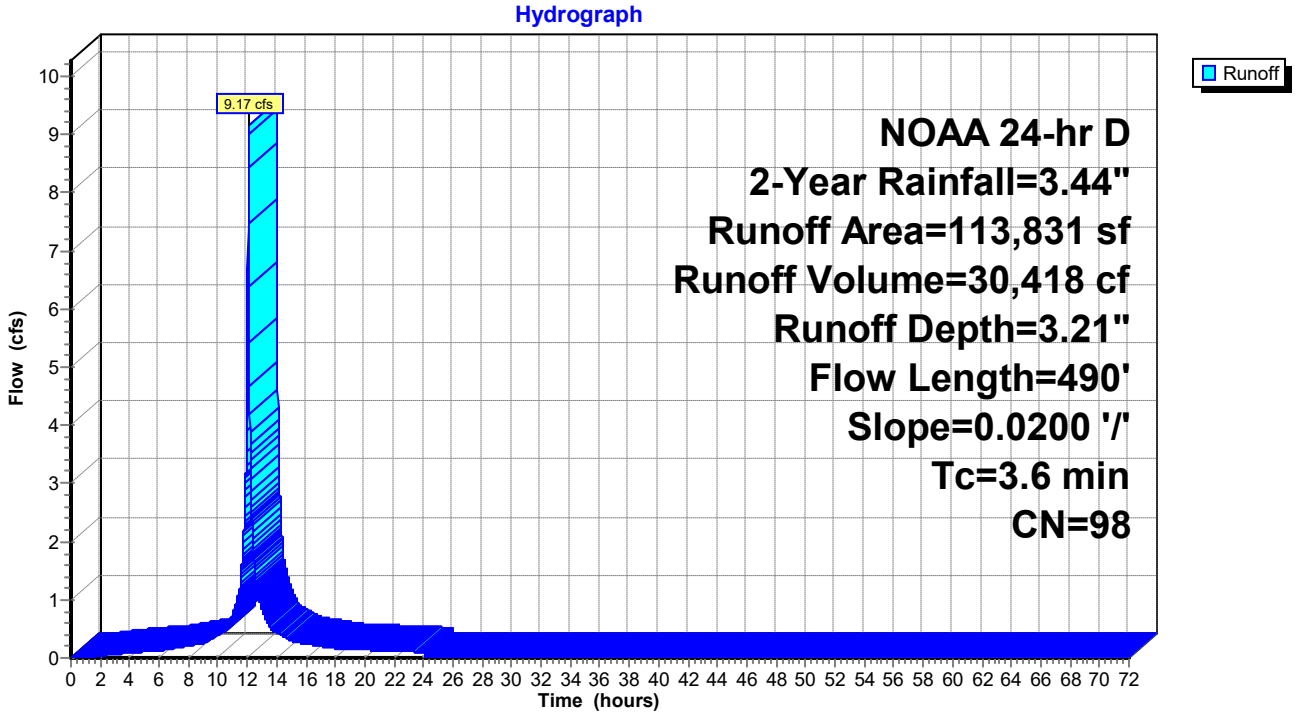
Runoff = 9.17 cfs @ 12.11 hrs, Volume= 30,418 cf, Depth= 3.21"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
10,890	98	Roofs, HSG D
26,136	98	Paved parking, HSG D
41,818	98	Roofs, HSG C
34,987	98	Paved parking, HSG C
113,831	98	Weighted Average
113,831		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 22S: Basin 6 - Imp



Hydrograph for Subcatchment 22S: Basin 6 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.01	0.03
3.00	0.13	0.03	0.06
4.00	0.18	0.06	0.09
5.00	0.24	0.09	0.11
6.00	0.29	0.14	0.13
7.00	0.36	0.20	0.17
8.00	0.45	0.27	0.21
9.00	0.55	0.36	0.26
10.00	0.68	0.49	0.40
11.00	0.89	0.69	0.72
12.00	1.65	1.43	**5.43**
13.00	2.55	2.32	**0.85**
14.00	2.76	2.53	0.44
15.00	2.89	2.66	0.29
16.00	2.99	2.76	0.24
17.00	3.08	2.85	0.20
18.00	3.15	2.91	0.16
19.00	3.20	2.97	0.15
20.00	3.26	3.03	0.14
21.00	3.31	3.08	0.13
22.00	3.36	3.12	0.12
23.00	3.40	3.17	0.11
24.00	**3.44**	**3.21**	0.10
25.00	3.44	3.21	0.00
26.00	3.44	3.21	0.00
27.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00
29.00	3.44	3.21	0.00
30.00	3.44	3.21	0.00
31.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00
33.00	3.44	3.21	0.00
34.00	3.44	3.21	0.00
35.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00
37.00	3.44	3.21	0.00
38.00	3.44	3.21	0.00
39.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00
41.00	3.44	3.21	0.00
42.00	3.44	3.21	0.00
43.00	3.44	3.21	0.00
44.00	3.44	3.21	0.00
45.00	3.44	3.21	0.00
46.00	3.44	3.21	0.00
47.00	3.44	3.21	0.00
48.00	3.44	3.21	0.00
49.00	3.44	3.21	0.00
50.00	3.44	3.21	0.00
51.00	3.44	3.21	0.00
52.00	3.44	3.21	0.00
53.00	3.44	3.21	0.00
54.00	3.44	3.21	0.00
55.00	3.44	3.21	0.00
56.00	3.44	3.21	0.00
57.00	3.44	3.21	0.00
58.00	3.44	3.21	0.00
59.00	3.44	3.21	0.00
60.00	3.44	3.21	0.00
61.00	3.44	3.21	0.00
62.00	3.44	3.21	0.00
63.00	3.44	3.21	0.00
64.00	3.44	3.21	0.00
65.00	3.44	3.21	0.00
66.00	3.44	3.21	0.00
67.00	3.44	3.21	0.00
68.00	3.44	3.21	0.00
69.00	3.44	3.21	0.00
70.00	3.44	3.21	0.00
71.00	3.44	3.21	0.00
72.00	3.44	3.21	0.00

Summary for Subcatchment 23S: Basin 6 - Perv

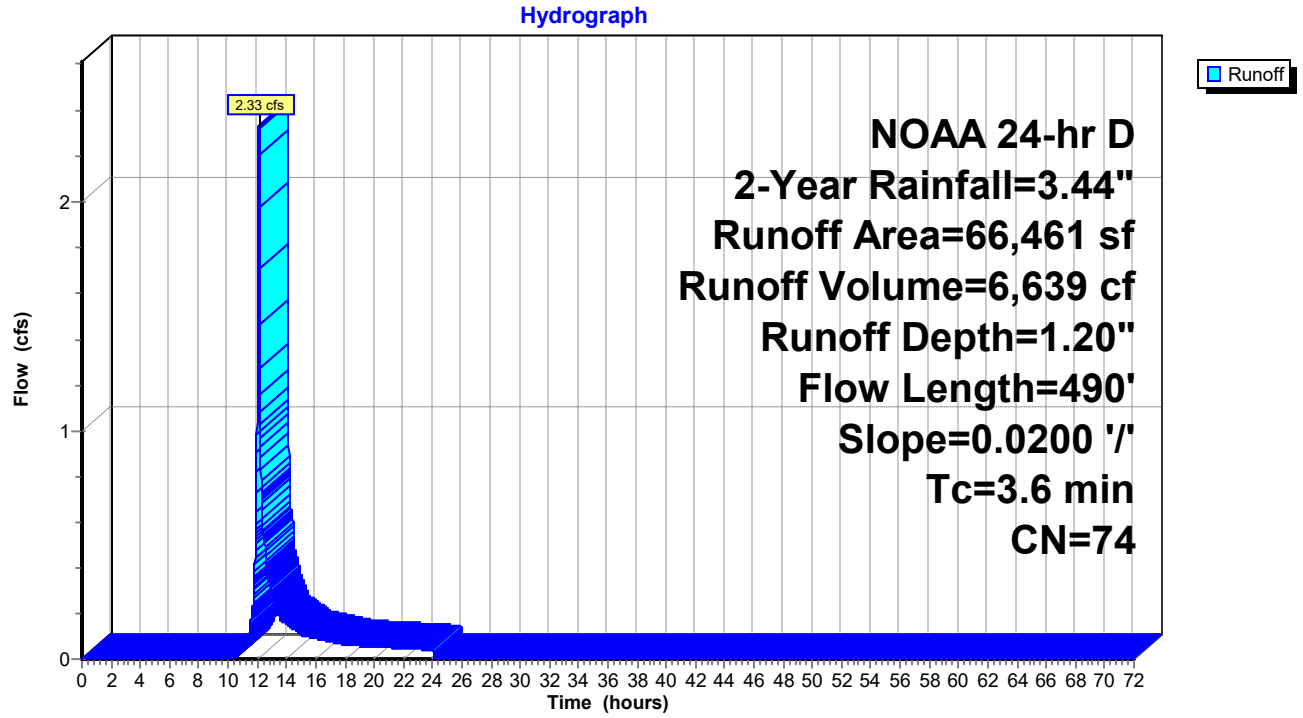
Runoff = 2.33 cfs @ 12.11 hrs, Volume= 6,639 cf, Depth= 1.20"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
66,461	74	>75% Grass cover, Good, HSG C
66,461		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 23S: Basin 6 - Perv



Hydrograph for Subcatchment 23S: Basin 6 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.13	0.00	0.00
4.00	0.18	0.00	0.00
5.00	0.24	0.00	0.00
6.00	0.29	0.00	0.00
7.00	0.36	0.00	0.00
8.00	0.45	0.00	0.00
9.00	0.55	0.00	0.00
10.00	0.68	0.00	0.00
11.00	0.89	0.01	0.04
12.00	1.65	0.20	**1.11**
13.00	2.55	0.63	**0.28**
14.00	2.76	0.76	0.15
15.00	2.89	0.84	0.11
16.00	2.99	0.90	0.09
17.00	3.08	0.96	0.08
18.00	3.15	1.00	0.06
19.00	3.20	1.04	0.06
20.00	3.26	1.08	0.05
21.00	3.31	1.11	0.05
22.00	3.36	1.14	0.05
23.00	3.40	1.17	0.04
24.00	**3.44**	**1.20**	0.04
25.00	3.44	1.20	0.00
26.00	3.44	1.20	0.00
27.00	3.44	1.20	0.00
28.00	3.44	1.20	0.00
29.00	3.44	1.20	0.00
30.00	3.44	1.20	0.00
31.00	3.44	1.20	0.00
32.00	3.44	1.20	0.00
33.00	3.44	1.20	0.00
34.00	3.44	1.20	0.00
35.00	3.44	1.20	0.00
36.00	3.44	1.20	0.00
37.00	3.44	1.20	0.00
38.00	3.44	1.20	0.00
39.00	3.44	1.20	0.00
40.00	3.44	1.20	0.00
41.00	3.44	1.20	0.00
42.00	3.44	1.20	0.00
43.00	3.44	1.20	0.00
44.00	3.44	1.20	0.00
45.00	3.44	1.20	0.00
46.00	3.44	1.20	0.00
47.00	3.44	1.20	0.00
48.00	3.44	1.20	0.00
49.00	3.44	1.20	0.00
50.00	3.44	1.20	0.00
51.00	3.44	1.20	0.00
52.00	3.44	1.20	0.00
53.00	3.44	1.20	0.00
54.00	3.44	1.20	0.00
55.00	3.44	1.20	0.00
56.00	3.44	1.20	0.00
57.00	3.44	1.20	0.00
58.00	3.44	1.20	0.00
59.00	3.44	1.20	0.00
60.00	3.44	1.20	0.00
61.00	3.44	1.20	0.00
62.00	3.44	1.20	0.00
63.00	3.44	1.20	0.00
64.00	3.44	1.20	0.00
65.00	3.44	1.20	0.00
66.00	3.44	1.20	0.00
67.00	3.44	1.20	0.00
68.00	3.44	1.20	0.00
69.00	3.44	1.20	0.00
70.00	3.44	1.20	0.00
71.00	3.44	1.20	0.00
72.00	3.44	1.20	0.00

Summary for Subcatchment 26S: DA 1 Und - Perv

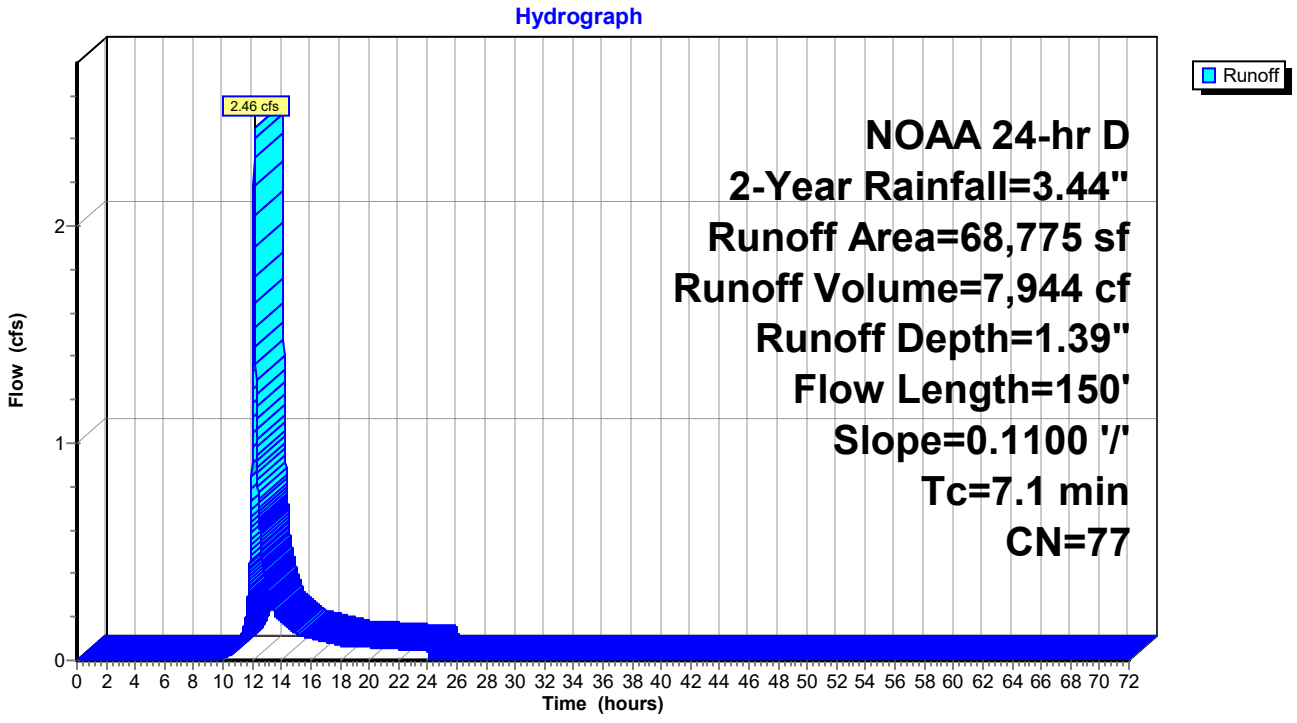
Runoff = 2.46 cfs @ 12.15 hrs, Volume= 7,944 cf, Depth= 1.39"
Routed to Link 25L : POA 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
34,475	80	>75% Grass cover, Good, HSG D
34,300	74	>75% Grass cover, Good, HSG C
68,775	77	Weighted Average
68,775		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	50	0.1100	5.34		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.1	150	Total			

Subcatchment 26S: DA 1 Und - Perv



Hydrograph for Subcatchment 26S: DA 1 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.13	0.00	0.00
4.00	0.18	0.00	0.00
5.00	0.24	0.00	0.00
6.00	0.29	0.00	0.00
7.00	0.36	0.00	0.00
8.00	0.45	0.00	0.00
9.00	0.55	0.00	0.00
10.00	0.68	0.00	0.01
11.00	0.89	0.03	0.07
12.00	1.65	0.27	**1.05**
13.00	2.55	0.77	**0.34**
14.00	2.76	0.91	0.18
15.00	2.89	1.00	0.12
16.00	2.99	1.07	0.10
17.00	3.08	1.13	0.09
18.00	3.15	1.17	0.07
19.00	3.20	1.22	0.06
20.00	3.26	1.25	0.06
21.00	3.31	1.29	0.06
22.00	3.36	1.33	0.05
23.00	3.40	1.36	0.05
24.00	**3.44**	**1.39**	0.04
25.00	3.44	1.39	0.00
26.00	3.44	1.39	0.00
27.00	3.44	1.39	0.00
28.00	3.44	1.39	0.00
29.00	3.44	1.39	0.00
30.00	3.44	1.39	0.00
31.00	3.44	1.39	0.00
32.00	3.44	1.39	0.00
33.00	3.44	1.39	0.00
34.00	3.44	1.39	0.00
35.00	3.44	1.39	0.00
36.00	3.44	1.39	0.00
37.00	3.44	1.39	0.00
38.00	3.44	1.39	0.00
39.00	3.44	1.39	0.00
40.00	3.44	1.39	0.00
41.00	3.44	1.39	0.00
42.00	3.44	1.39	0.00
43.00	3.44	1.39	0.00
44.00	3.44	1.39	0.00
45.00	3.44	1.39	0.00
46.00	3.44	1.39	0.00
47.00	3.44	1.39	0.00
48.00	3.44	1.39	0.00
49.00	3.44	1.39	0.00
50.00	3.44	1.39	0.00
51.00	3.44	1.39	0.00
52.00	3.44	1.39	0.00
53.00	3.44	1.39	0.00
54.00	3.44	1.39	0.00
55.00	3.44	1.39	0.00
56.00	3.44	1.39	0.00
57.00	3.44	1.39	0.00
58.00	3.44	1.39	0.00
59.00	3.44	1.39	0.00
60.00	3.44	1.39	0.00
61.00	3.44	1.39	0.00
62.00	3.44	1.39	0.00
63.00	3.44	1.39	0.00
64.00	3.44	1.39	0.00
65.00	3.44	1.39	0.00
66.00	3.44	1.39	0.00
67.00	3.44	1.39	0.00
68.00	3.44	1.39	0.00
69.00	3.44	1.39	0.00
70.00	3.44	1.39	0.00
71.00	3.44	1.39	0.00
72.00	3.44	1.39	0.00

Summary for Subcatchment 27S: Basin 5 - Perv

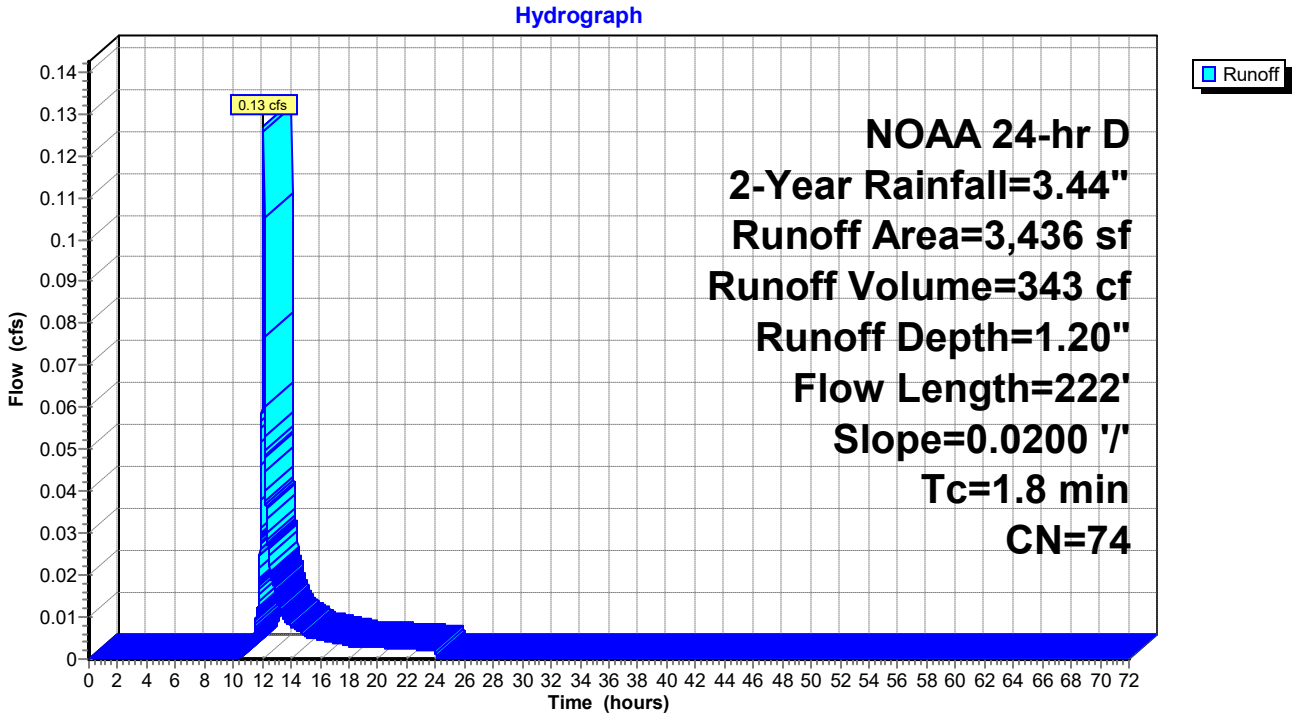
Runoff = 0.13 cfs @ 12.10 hrs, Volume= 343 cf, Depth= 1.20"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
3,436	74	>75% Grass cover, Good, HSG C
3,436		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 27S: Basin 5 - Perv



Hydrograph for Subcatchment 27S: Basin 5 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.13	0.00	0.00
4.00	0.18	0.00	0.00
5.00	0.24	0.00	0.00
6.00	0.29	0.00	0.00
7.00	0.36	0.00	0.00
8.00	0.45	0.00	0.00
9.00	0.55	0.00	0.00
10.00	0.68	0.00	0.00
11.00	0.89	0.01	0.00
12.00	1.65	0.20	**0.06**
13.00	2.55	0.63	**0.01**
14.00	2.76	0.76	0.01
15.00	2.89	0.84	0.01
16.00	2.99	0.90	0.00
17.00	3.08	0.96	0.00
18.00	3.15	1.00	0.00
19.00	3.20	1.04	0.00
20.00	3.26	1.08	0.00
21.00	3.31	1.11	0.00
22.00	3.36	1.14	0.00
23.00	3.40	1.17	0.00
24.00	**3.44**	**1.20**	0.00
25.00	3.44	1.20	0.00
26.00	3.44	1.20	0.00
27.00	3.44	1.20	0.00
28.00	3.44	1.20	0.00
29.00	3.44	1.20	0.00
30.00	3.44	1.20	0.00
31.00	3.44	1.20	0.00
32.00	3.44	1.20	0.00
33.00	3.44	1.20	0.00
34.00	3.44	1.20	0.00
35.00	3.44	1.20	0.00
36.00	3.44	1.20	0.00
37.00	3.44	1.20	0.00
38.00	3.44	1.20	0.00
39.00	3.44	1.20	0.00
40.00	3.44	1.20	0.00
41.00	3.44	1.20	0.00
42.00	3.44	1.20	0.00
43.00	3.44	1.20	0.00
44.00	3.44	1.20	0.00
45.00	3.44	1.20	0.00
46.00	3.44	1.20	0.00
47.00	3.44	1.20	0.00
48.00	3.44	1.20	0.00
49.00	3.44	1.20	0.00
50.00	3.44	1.20	0.00
51.00	3.44	1.20	0.00
52.00	3.44	1.20	0.00
53.00	3.44	1.20	0.00
54.00	3.44	1.20	0.00
55.00	3.44	1.20	0.00
56.00	3.44	1.20	0.00
57.00	3.44	1.20	0.00
58.00	3.44	1.20	0.00
59.00	3.44	1.20	0.00
60.00	3.44	1.20	0.00
61.00	3.44	1.20	0.00
62.00	3.44	1.20	0.00
63.00	3.44	1.20	0.00
64.00	3.44	1.20	0.00
65.00	3.44	1.20	0.00
66.00	3.44	1.20	0.00
67.00	3.44	1.20	0.00
68.00	3.44	1.20	0.00
69.00	3.44	1.20	0.00
70.00	3.44	1.20	0.00
71.00	3.44	1.20	0.00
72.00	3.44	1.20	0.00

Summary for Pond 16P: Basin 1

Inflow Area = 378,971 sf, 51.29% Impervious, Inflow Depth = 0.74" for 2-Year event
Inflow = 5.32 cfs @ 12.22 hrs, Volume= 23,295 cf
Outflow = 0.19 cfs @ 17.68 hrs, Volume= 13,426 cf, Atten= 96%, Lag= 327.6 min
Primary = 0.19 cfs @ 17.68 hrs, Volume= 13,426 cf
Routed to Link 25L : POA 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 544.02' @ 17.68 hrs Surf.Area= 33,581 sf Storage= 17,163 cf

Plug-Flow detention time= 955.1 min calculated for 13,426 cf (58% of inflow)
Center-of-Mass det. time= 826.2 min (1,649.2 - 822.9)

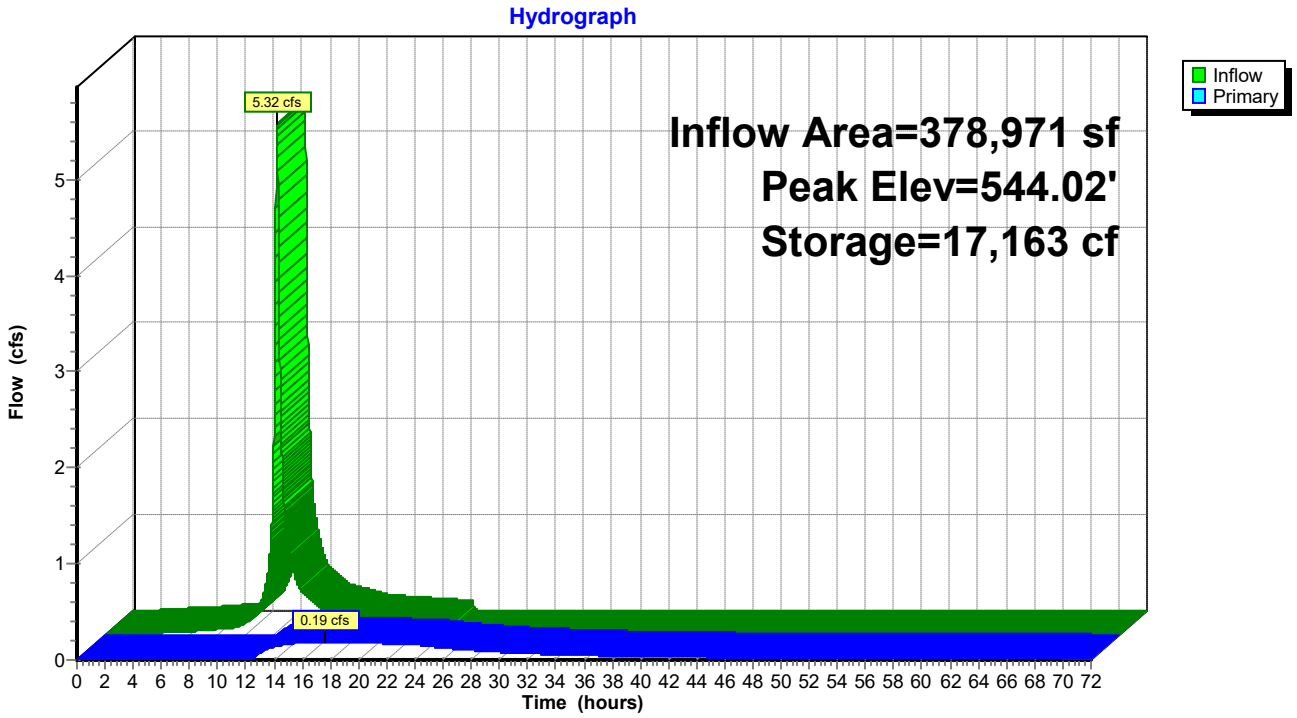
Volume	Invert	Avail.Storage	Storage Description
#1	543.50'	126,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
543.50	32,670	0	0
544.00	33,541	16,553	16,553
545.00	35,719	34,630	51,183
546.00	37,897	36,808	87,991
547.00	39,640	38,769	126,759

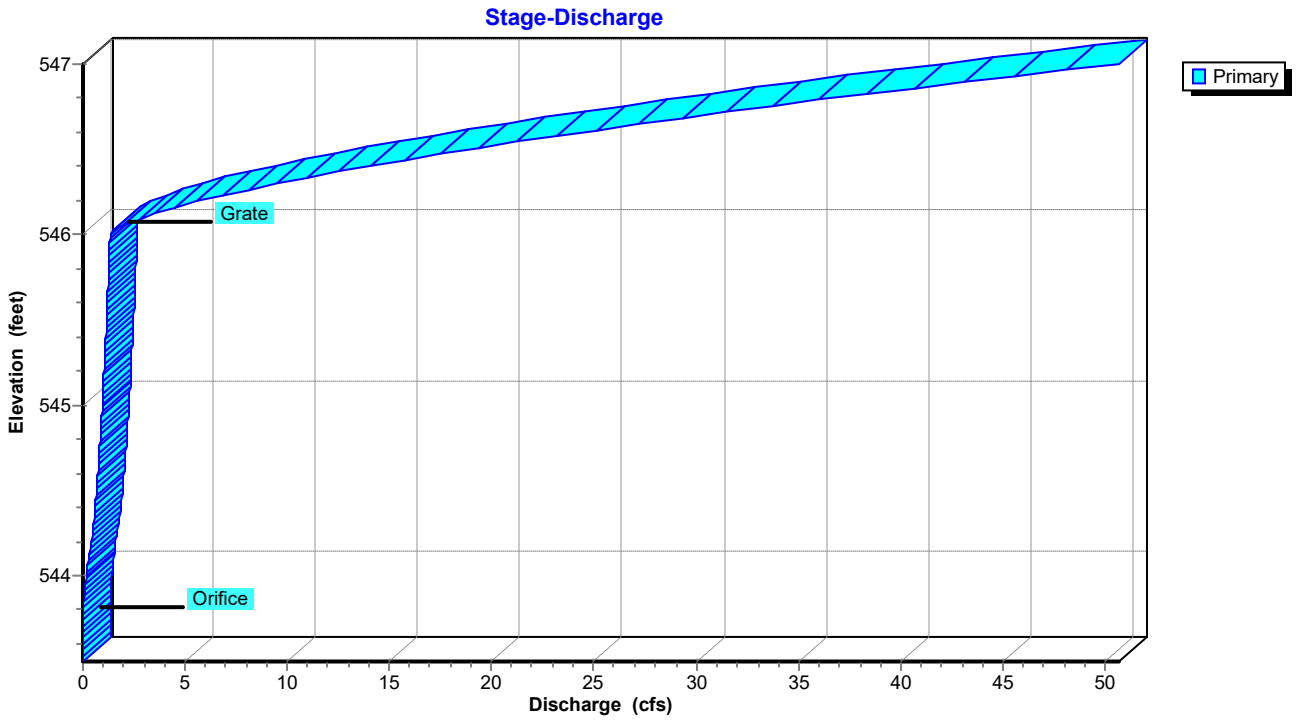
Device	Routing	Invert	Outlet Devices
#1	Primary	546.00'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	543.75'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.19 cfs @ 17.68 hrs HW=544.02' (Free Discharge)
1=Grate (Controls 0.00 cfs)
2=Orifice (Orifice Controls 0.19 cfs @ 1.76 fps)

Pond 16P: Basin 1



Pond 16P: Basin 1



Hydrograph for Pond 16P: Basin 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	543.50	0.00
2.00	0.01	14	543.50	0.00
4.00	0.03	154	543.50	0.00
6.00	0.04	404	543.51	0.00
8.00	0.07	787	543.52	0.00
10.00	0.14	1,424	543.54	0.00
12.00	**1.97**	4,726	543.64	0.00
14.00	**0.46**	15,724	543.98	0.14
16.00	0.26	**16,944**	**544.01**	**0.18**
18.00	0.18	**17,156**	**544.02**	**0.19**
20.00	0.15	16,963	544.01	0.18
22.00	0.13	16,685	544.00	0.17
24.00	0.11	16,342	543.99	0.16
26.00	0.00	15,386	543.97	0.13
28.00	0.00	14,562	543.94	0.10
30.00	0.00	13,895	543.92	0.08
32.00	0.00	13,347	543.90	0.07
34.00	0.00	12,889	543.89	0.06
36.00	0.00	12,505	543.88	0.05
38.00	0.00	12,173	543.87	0.04
40.00	0.00	11,886	543.86	0.04
42.00	0.00	11,638	543.85	0.03
44.00	0.00	11,422	543.85	0.03
46.00	0.00	11,228	543.84	0.03
48.00	0.00	11,054	543.84	0.02
50.00	0.00	10,897	543.83	0.02
52.00	0.00	10,756	543.83	0.02
54.00	0.00	10,629	543.82	0.02
56.00	0.00	10,515	543.82	0.02
58.00	0.00	10,412	543.82	0.01
60.00	0.00	10,319	543.81	0.01
62.00	0.00	10,232	543.81	0.01
64.00	0.00	10,150	543.81	0.01
66.00	0.00	10,073	543.81	0.01
68.00	0.00	10,001	543.80	0.01
70.00	0.00	9,933	543.80	0.01
72.00	0.00	9,869	543.80	0.01

Stage-Discharge for Pond 16P: Basin 1

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
543.50	0.00	544.52	0.68	545.54	1.17	546.56	22.07
543.52	0.00	544.54	0.69	545.56	1.18	546.58	23.18
543.54	0.00	544.56	0.71	545.58	1.19	546.60	24.32
543.56	0.00	544.58	0.72	545.60	1.20	546.62	25.48
543.58	0.00	544.60	0.73	545.62	1.20	546.64	26.65
543.60	0.00	544.62	0.74	545.64	1.21	546.66	27.84
543.62	0.00	544.64	0.76	545.66	1.22	546.68	29.05
543.64	0.00	544.66	0.77	545.68	1.23	546.70	30.28
543.66	0.00	544.68	0.78	545.70	1.23	546.72	31.53
543.68	0.00	544.70	0.79	545.72	1.24	546.74	32.79
543.70	0.00	544.72	0.80	545.74	1.25	546.76	34.07
543.72	0.00	544.74	0.81	545.76	1.25	546.78	35.37
543.74	0.00	544.76	0.82	545.78	1.26	546.80	36.68
543.76	0.00	544.78	0.83	545.80	1.27	546.82	38.01
543.78	0.00	544.80	0.85	545.82	1.28	546.84	39.36
543.80	0.01	544.82	0.86	545.84	1.28	546.86	40.72
543.82	0.02	544.84	0.87	545.86	1.29	546.88	42.10
543.84	0.02	544.86	0.88	545.88	1.30	546.90	43.49
543.86	0.04	544.88	0.89	545.90	1.30	546.92	44.90
543.88	0.05	544.90	0.90	545.92	1.31	546.94	46.32
543.90	0.07	544.92	0.91	545.94	1.32	546.96	47.76
543.92	0.08	544.94	0.92	545.96	1.32	546.98	49.22
543.94	0.10	544.96	0.93	545.98	1.33	547.00	**50.69**
543.96	0.12	544.98	0.94	546.00	1.34		
543.98	0.14	545.00	0.95	546.02	1.48		
544.00	0.17	545.02	0.95	546.04	1.74		
544.02	0.19	545.04	0.96	546.06	2.08		
544.04	0.22	545.06	0.97	546.08	2.47		
544.06	0.24	545.08	0.98	546.10	2.92		
544.08	0.27	545.10	0.99	546.12	3.42		
544.10	0.30	545.12	1.00	546.14	3.95		
544.12	0.32	545.14	1.01	546.16	4.53		
544.14	0.35	545.16	1.02	546.18	5.14		
544.16	0.38	545.18	1.03	546.20	5.79		
544.18	0.40	545.20	1.04	546.22	6.47		
544.20	0.43	545.22	1.04	546.24	7.18		
544.22	0.45	545.24	1.05	546.26	7.92		
544.24	0.47	545.26	1.06	546.28	8.69		
544.26	0.48	545.28	1.07	546.30	9.49		
544.28	0.50	545.30	1.08	546.32	10.32		
544.30	0.52	545.32	1.09	546.34	11.17		
544.32	0.53	545.34	1.09	546.36	12.05		
544.34	0.55	545.36	1.10	546.38	12.95		
544.36	0.57	545.38	1.11	546.40	13.87		
544.38	0.58	545.40	1.12	546.42	14.82		
544.40	0.60	545.42	1.13	546.44	15.79		
544.42	0.61	545.44	1.13	546.46	16.79		
544.44	0.63	545.46	1.14	546.48	17.80		
544.46	0.64	545.48	1.15	546.50	18.84		
544.48	0.66	545.50	1.16	546.52	19.89		
544.50	0.67	545.52	1.17	546.54	20.97		

Stage-Area-Storage for Pond 16P: Basin 1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
543.50	32,670	0
543.55	32,757	1,636
543.60	32,844	3,276
543.65	32,931	4,920
543.70	33,018	6,569
543.75	33,106	8,222
543.80	33,193	9,879
543.85	33,280	11,541
543.90	33,367	13,207
543.95	33,454	14,878
544.00	33,541	16,553
544.05	33,650	18,233
544.10	33,759	19,918
544.15	33,868	21,608
544.20	33,977	23,305
544.25	34,086	25,006
544.30	34,194	26,713
544.35	34,303	28,426
544.40	34,412	30,143
544.45	34,521	31,867
544.50	34,630	33,596
544.55	34,739	35,330
544.60	34,848	37,069
544.65	34,957	38,815
544.70	35,066	40,565
544.75	35,175	42,321
544.80	35,283	44,083
544.85	35,392	45,849
544.90	35,501	47,622
544.95	35,610	49,400
545.00	35,719	51,183
545.05	35,828	52,971
545.10	35,937	54,766
545.15	36,046	56,565
545.20	36,155	58,370
545.25	36,264	60,181
545.30	36,372	61,996
545.35	36,481	63,818
545.40	36,590	65,645
545.45	36,699	67,477
545.50	36,808	69,315
545.55	36,917	71,158
545.60	37,026	73,006
545.65	37,135	74,860
545.70	37,244	76,720
545.75	37,353	78,585
545.80	37,461	80,455
545.85	37,570	82,331
545.90	37,679	84,212
545.95	37,788	86,099
546.00	37,897	87,991
546.05	37,984	89,888
546.10	38,071	91,789
546.15	38,158	93,695
546.20	38,246	95,605
546.25	38,333	97,519
546.30	38,420	99,438
546.35	38,507	101,361
546.40	38,594	103,289
546.45	38,681	105,221
546.50	38,769	107,157
546.55	38,856	109,098
546.60	38,943	111,043
546.65	39,030	112,992
546.70	39,117	114,946
546.75	39,204	116,904
546.80	39,291	118,866
546.85	39,379	120,833
546.90	39,466	122,804
546.95	39,553	124,779
547.00	**39,640**	**126,759**

Summary for Pond 18P: Basin 5

Inflow Area = 46,603 sf, 92.63% Impervious, Inflow Depth = 3.06" for 2-Year event
Inflow = 3.68 cfs @ 12.10 hrs, Volume= 11,878 cf
Outflow = 1.37 cfs @ 11.95 hrs, Volume= 11,878 cf, Atten= 63%, Lag= 0.0 min
Discarded = 1.37 cfs @ 11.95 hrs, Volume= 11,878 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 579.23' @ 12.16 hrs Surf.Area= 14,810 sf Storage= 1,374 cf

Plug-Flow detention time= 6.0 min calculated for 11,877 cf (100% of inflow)
Center-of-Mass det. time= 6.0 min (762.1 - 756.1)

Volume	Invert	Avail.Storage	Storage Description
#1	579.00'	31,397 cf	**Custom Stage Data (Prismatic)** Listed below 78,493 cf Overall x 40.0% Voids

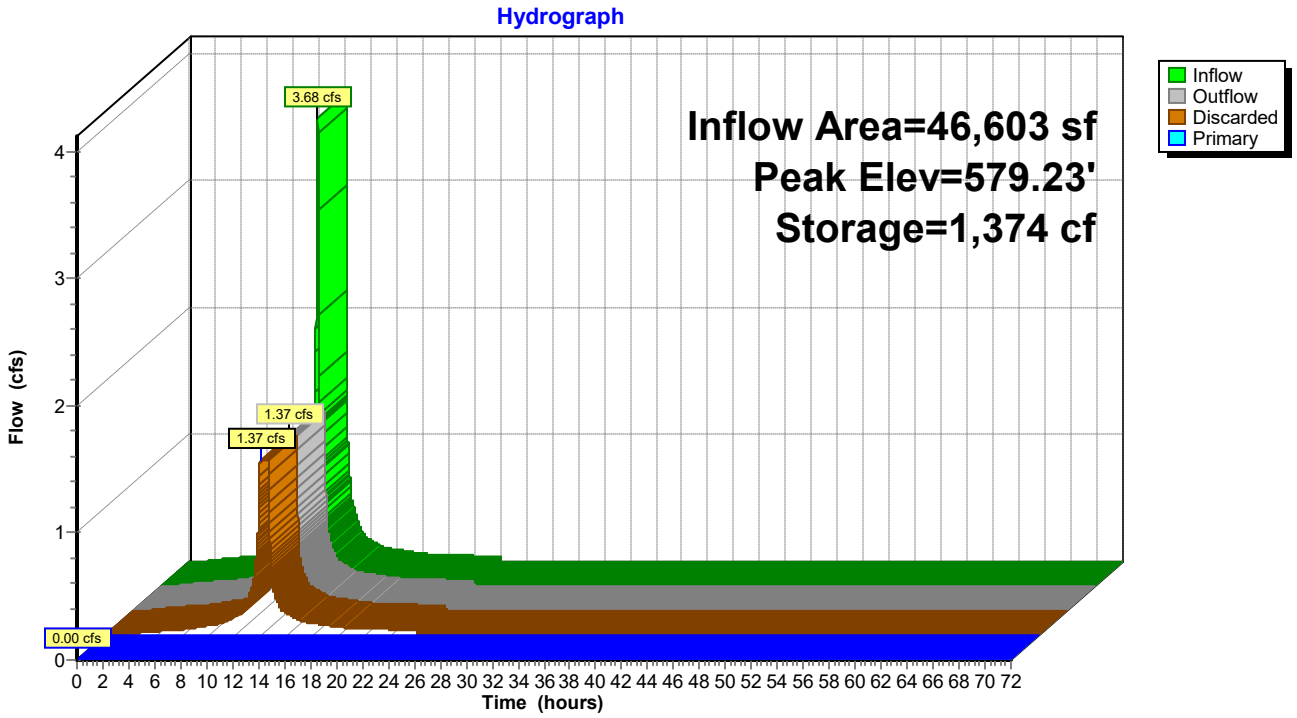
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
579.00	14,810	0	0
580.00	14,810	14,810	14,810
581.00	14,810	14,810	29,620
582.00	14,810	14,810	44,430
583.00	14,810	14,810	59,240
584.00	14,810	14,810	74,050
584.30	14,810	4,443	78,493

Device	Routing	Invert	Outlet Devices
#1	Primary	579.25'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	579.00'	**4.000 in/hr Exfiltration over Surface area**

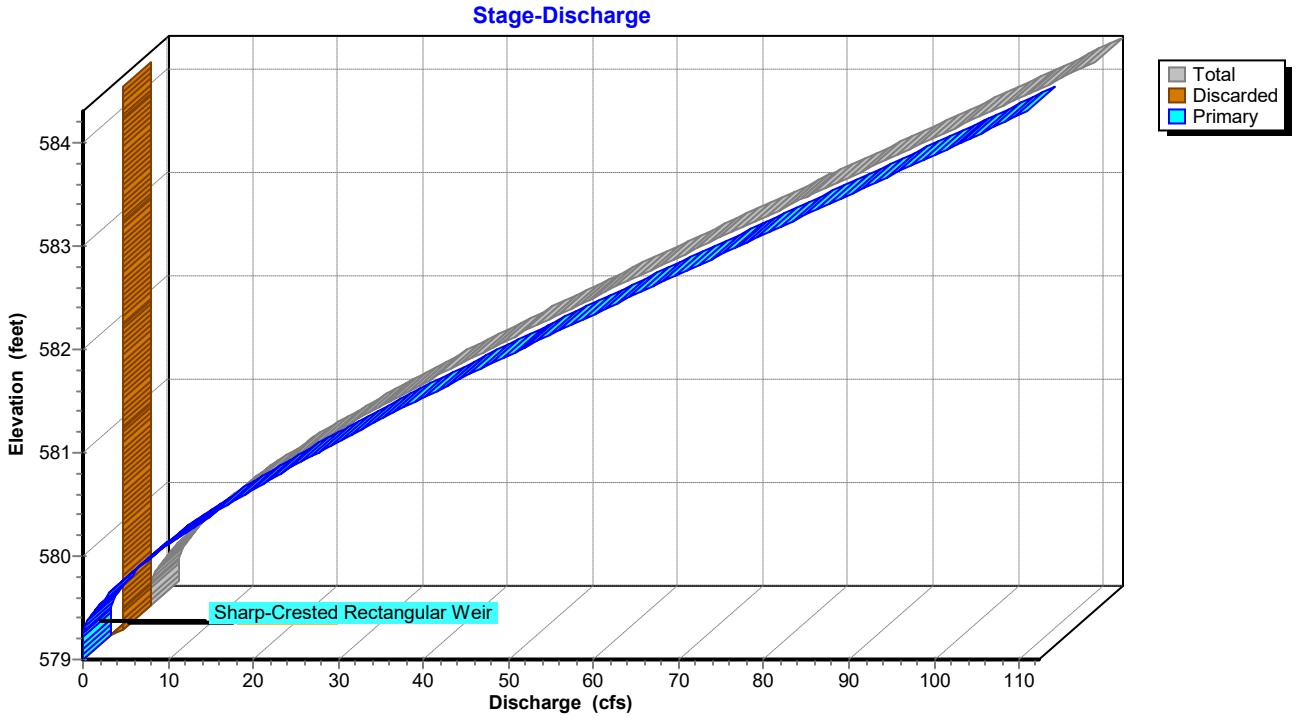
Discarded OutFlow Max=1.37 cfs @ 11.95 hrs HW=579.06' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.37 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=579.00' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 18P: Basin 5



Pond 18P: Basin 5



Hydrograph for Pond 18P: Basin 5

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	579.00	0.00	0.00	**0.00**
2.00	0.01	3	579.00	0.01	0.01	0.00
4.00	0.03	8	579.00	0.03	0.03	0.00
6.00	0.05	11	579.00	0.05	0.05	0.00
8.00	0.08	18	579.00	0.08	0.08	0.00
10.00	0.15	34	579.01	**0.15**	**0.15**	0.00
12.00	**2.18**	**478**	**579.08**	**1.37**	**1.37**	0.00
14.00	**0.17**	**40**	**579.01**	0.18	0.18	0.00
16.00	0.10	22	579.00	0.10	0.10	0.00
18.00	0.06	15	579.00	0.07	0.07	0.00
20.00	0.06	13	579.00	0.06	0.06	0.00
22.00	0.05	11	579.00	0.05	0.05	0.00
24.00	0.04	9	579.00	0.04	0.04	0.00
26.00	0.00	0	579.00	0.00	0.00	0.00
28.00	0.00	0	579.00	0.00	0.00	0.00
30.00	0.00	0	579.00	0.00	0.00	0.00
32.00	0.00	0	579.00	0.00	0.00	0.00
34.00	0.00	0	579.00	0.00	0.00	0.00
36.00	0.00	0	579.00	0.00	0.00	0.00
38.00	0.00	0	579.00	0.00	0.00	0.00
40.00	0.00	0	579.00	0.00	0.00	0.00
42.00	0.00	0	579.00	0.00	0.00	0.00
44.00	0.00	0	579.00	0.00	0.00	0.00
46.00	0.00	0	579.00	0.00	0.00	0.00
48.00	0.00	0	579.00	0.00	0.00	0.00
50.00	0.00	0	579.00	0.00	0.00	0.00
52.00	0.00	0	579.00	0.00	0.00	0.00
54.00	0.00	0	579.00	0.00	0.00	0.00
56.00	0.00	0	579.00	0.00	0.00	0.00
58.00	0.00	0	579.00	0.00	0.00	0.00
60.00	0.00	0	579.00	0.00	0.00	0.00
62.00	0.00	0	579.00	0.00	0.00	0.00
64.00	0.00	0	579.00	0.00	0.00	0.00
66.00	0.00	0	579.00	0.00	0.00	0.00
68.00	0.00	0	579.00	0.00	0.00	0.00
70.00	0.00	0	579.00	0.00	0.00	0.00
72.00	0.00	0	579.00	0.00	0.00	0.00

Stage-Discharge for Pond 18P: Basin 5

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
579.00	0.00	**0.00**	0.00
579.10	1.37	**1.37**	0.00
579.20	1.37	1.37	0.00
579.30	1.52	1.37	0.15
579.40	2.13	1.37	0.75
579.50	2.99	1.37	1.61
579.60	4.03	1.37	2.66
579.70	5.23	1.37	3.86
579.80	6.56	1.37	5.19
579.90	8.00	1.37	6.63
580.00	9.55	1.37	8.18
580.10	11.19	1.37	9.81
580.20	12.91	1.37	11.54
580.30	14.71	1.37	13.33
580.40	16.57	1.37	15.20
580.50	18.51	1.37	17.14
580.60	20.50	1.37	19.13
580.70	22.55	1.37	21.18
580.80	24.66	1.37	23.28
580.90	26.81	1.37	25.44
581.00	29.00	1.37	27.63
581.10	31.24	1.37	29.87
581.20	33.52	1.37	32.14
581.30	35.83	1.37	34.46
581.40	38.17	1.37	36.80
581.50	40.55	1.37	39.18
581.60	42.96	1.37	41.58
581.70	45.39	1.37	44.02
581.80	47.84	1.37	46.47
581.90	50.32	1.37	48.95
582.00	52.82	1.37	51.45
582.10	55.34	1.37	53.96
582.20	57.87	1.37	56.50
582.30	60.42	1.37	59.05
582.40	62.98	1.37	61.61
582.50	65.55	1.37	64.18
582.60	68.14	1.37	66.77
582.70	70.73	1.37	69.36
582.80	73.33	1.37	71.96
582.90	75.94	1.37	74.56
583.00	78.55	1.37	77.18
583.10	81.16	1.37	79.79
583.20	83.78	1.37	82.40
583.30	86.39	1.37	85.02
583.40	89.01	1.37	87.64
583.50	91.62	1.37	90.25
583.60	94.23	1.37	92.86
583.70	96.84	1.37	95.47
583.80	99.44	1.37	98.07
583.90	102.03	1.37	100.66
584.00	104.62	1.37	103.25
584.10	107.20	1.37	105.83
584.20	109.77	1.37	108.40
584.30	**112.33**	1.37	**110.96**

Stage-Area-Storage for Pond 18P: Basin 5

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
579.00	**14,810**	0
579.10	14,810	592
579.20	14,810	1,185
579.30	14,810	1,777
579.40	14,810	2,370
579.50	14,810	2,962
579.60	14,810	3,554
579.70	14,810	4,147
579.80	14,810	4,739
579.90	14,810	5,332
580.00	14,810	5,924
580.10	14,810	6,516
580.20	14,810	7,109
580.30	14,810	7,701
580.40	14,810	8,294
580.50	14,810	8,886
580.60	14,810	9,478
580.70	14,810	10,071
580.80	14,810	10,663
580.90	14,810	11,256
581.00	14,810	11,848
581.10	14,810	12,440
581.20	14,810	13,033
581.30	14,810	13,625
581.40	14,810	14,218
581.50	14,810	14,810
581.60	14,810	15,402
581.70	14,810	15,995
581.80	14,810	16,587
581.90	14,810	17,180
582.00	14,810	17,772
582.10	14,810	18,364
582.20	14,810	18,957
582.30	14,810	19,549
582.40	14,810	20,142
582.50	14,810	20,734
582.60	14,810	21,326
582.70	14,810	21,919
582.80	14,810	22,511
582.90	14,810	23,104
583.00	14,810	23,696
583.10	14,810	24,288
583.20	14,810	24,881
583.30	14,810	25,473
583.40	14,810	26,066
583.50	14,810	26,658
583.60	14,810	27,250
583.70	14,810	27,843
583.80	14,810	28,435
583.90	14,810	29,028
584.00	14,810	29,620
584.10	14,810	30,212
584.20	14,810	30,805
584.30	14,810	**31,397**

Summary for Pond 24P: Basin 6

Inflow Area = 180,292 sf, 63.14% Impervious, Inflow Depth = 2.47" for 2-Year event
Inflow = 11.49 cfs @ 12.11 hrs, Volume= 37,057 cf
Outflow = 8.49 cfs @ 12.15 hrs, Volume= 37,057 cf, Atten= 26%, Lag= 2.3 min
Discarded = 8.27 cfs @ 12.05 hrs, Volume= 36,997 cf
Primary = 0.22 cfs @ 12.15 hrs, Volume= 60 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 600.07' @ 12.15 hrs Surf.Area= 35,719 sf Storage= 995 cf

Plug-Flow detention time= 0.5 min calculated for 37,052 cf (100% of inflow)
Center-of-Mass det. time= 0.5 min (775.4 - 774.8)

Volume	Invert	Avail.Storage	Storage Description
#1	600.00'	20,288 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 50,721 cf Overall x 40.0% Voids

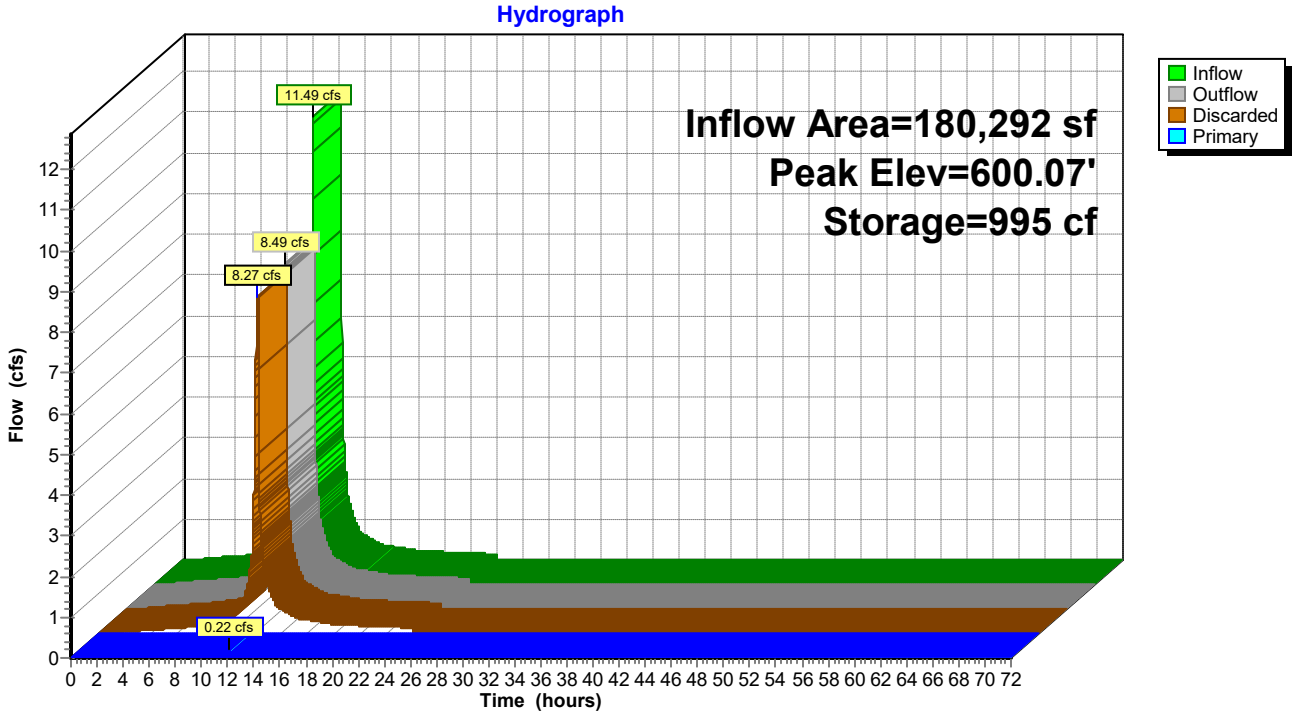
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
600.00	35,719	0	0
601.00	35,719	35,719	35,719
601.42	35,719	15,002	50,721

Device	Routing	Invert	Outlet Devices
#1	Primary	600.02'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	600.00'	**10.000 in/hr Exfiltration over Surface area**

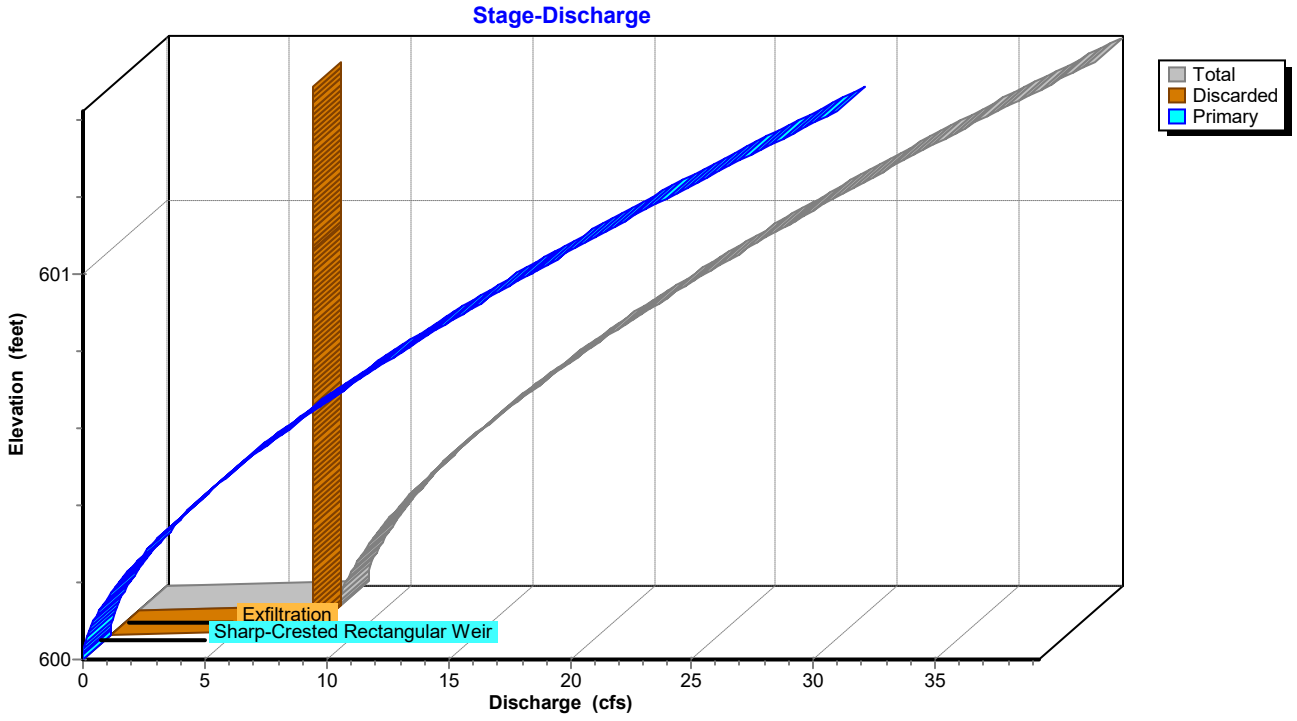
Discarded OutFlow Max=8.27 cfs @ 12.05 hrs HW=600.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 8.27 cfs)

Primary OutFlow Max=0.21 cfs @ 12.15 hrs HW=600.07' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.21 cfs @ 0.73 fps)

Pond 24P: Basin 6



Pond 24P: Basin 6



Hydrograph for Pond 24P: Basin 6

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	600.00	0.00	0.00	0.00
2.00	0.03	1	600.00	0.03	0.03	0.00
4.00	0.09	2	600.00	0.09	0.09	0.00
6.00	0.13	3	600.00	0.13	0.13	0.00
8.00	0.21	5	600.00	0.21	0.21	0.00
10.00	0.40	10	600.00	0.40	0.40	0.00
12.00	**6.54**	**158**	**600.01**	**6.45**	**6.45**	**0.00**
14.00	**0.59**	**14**	**600.00**	**0.59**	**0.59**	**0.00**
16.00	0.33	8	600.00	0.33	0.33	0.00
18.00	0.22	6	600.00	0.23	0.23	0.00
20.00	0.19	5	600.00	0.19	0.19	0.00
22.00	0.17	4	600.00	0.17	0.17	0.00
24.00	0.14	3	600.00	0.14	0.14	0.00
26.00	0.00	0	600.00	0.00	0.00	0.00
28.00	0.00	0	600.00	0.00	0.00	0.00
30.00	0.00	0	600.00	0.00	0.00	0.00
32.00	0.00	0	600.00	0.00	0.00	0.00
34.00	0.00	0	600.00	0.00	0.00	0.00
36.00	0.00	0	600.00	0.00	0.00	0.00
38.00	0.00	0	600.00	0.00	0.00	0.00
40.00	0.00	0	600.00	0.00	0.00	0.00
42.00	0.00	0	600.00	0.00	0.00	0.00
44.00	0.00	0	600.00	0.00	0.00	0.00
46.00	0.00	0	600.00	0.00	0.00	0.00
48.00	0.00	0	600.00	0.00	0.00	0.00
50.00	0.00	0	600.00	0.00	0.00	0.00
52.00	0.00	0	600.00	0.00	0.00	0.00
54.00	0.00	0	600.00	0.00	0.00	0.00
56.00	0.00	0	600.00	0.00	0.00	0.00
58.00	0.00	0	600.00	0.00	0.00	0.00
60.00	0.00	0	600.00	0.00	0.00	0.00
62.00	0.00	0	600.00	0.00	0.00	0.00
64.00	0.00	0	600.00	0.00	0.00	0.00
66.00	0.00	0	600.00	0.00	0.00	0.00
68.00	0.00	0	600.00	0.00	0.00	0.00
70.00	0.00	0	600.00	0.00	0.00	0.00
72.00	0.00	0	600.00	0.00	0.00	0.00

Stage-Discharge for Pond 24P: Basin 6

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
600.00	0.00	**0.00**	0.00
600.02	8.27	**8.27**	0.00
600.04	8.32	8.27	0.06
600.06	8.43	8.27	0.16
600.08	8.56	8.27	0.29
600.10	8.71	8.27	0.44
600.12	8.89	8.27	0.62
600.14	9.08	8.27	0.81
600.16	9.29	8.27	1.02
600.18	9.52	8.27	1.25
600.20	9.76	8.27	1.49
600.22	10.01	8.27	1.74
600.24	10.28	8.27	2.01
600.26	10.56	8.27	2.29
600.28	10.85	8.27	2.58
600.30	11.15	8.27	2.88
600.32	11.46	8.27	3.19
600.34	11.78	8.27	3.51
600.36	12.11	8.27	3.85
600.38	12.46	8.27	4.19
600.40	12.81	8.27	4.54
600.42	13.17	8.27	4.90
600.44	13.53	8.27	5.27
600.46	13.91	8.27	5.64
600.48	14.30	8.27	6.03
600.50	14.69	8.27	6.42
600.52	15.09	8.27	6.82
600.54	15.50	8.27	7.23
600.56	15.91	8.27	7.65
600.58	16.34	8.27	8.07
600.60	16.77	8.27	8.50
600.62	17.20	8.27	8.94
600.64	17.65	8.27	9.38
600.66	18.10	8.27	9.83
600.68	18.56	8.27	10.29
600.70	19.02	8.27	10.75
600.72	19.49	8.27	11.22
600.74	19.97	8.27	11.70
600.76	20.45	8.27	12.18
600.78	20.94	8.27	12.67
600.80	21.43	8.27	13.16
600.82	21.93	8.27	13.66
600.84	22.44	8.27	14.17
600.86	22.95	8.27	14.68
600.88	23.47	8.27	15.20
600.90	23.99	8.27	15.72
600.92	24.52	8.27	16.25
600.94	25.05	8.27	16.78
600.96	25.59	8.27	17.32
600.98	26.13	8.27	17.86
601.00	26.68	8.27	18.41
601.02	27.23	8.27	18.97
601.04	27.79	8.27	19.52
601.06	28.36	8.27	20.09
601.08	28.92	8.27	20.66
601.10	29.50	8.27	21.23
601.12	30.07	8.27	21.81
601.14	30.66	8.27	22.39
601.16	31.24	8.27	22.97
601.18	31.83	8.27	23.56
601.20	32.43	8.27	24.16
601.22	33.03	8.27	24.76
601.24	33.63	8.27	25.36
601.26	34.24	8.27	25.97
601.28	34.85	8.27	26.58
601.30	35.47	8.27	27.20
601.32	36.09	8.27	27.82
601.34	36.71	8.27	28.45
601.36	37.34	8.27	29.07
601.38	37.98	8.27	29.71
601.40	38.61	8.27	30.34
601.42	**39.25**	8.27	**30.98**

Stage-Area-Storage for Pond 24P: Basin 6

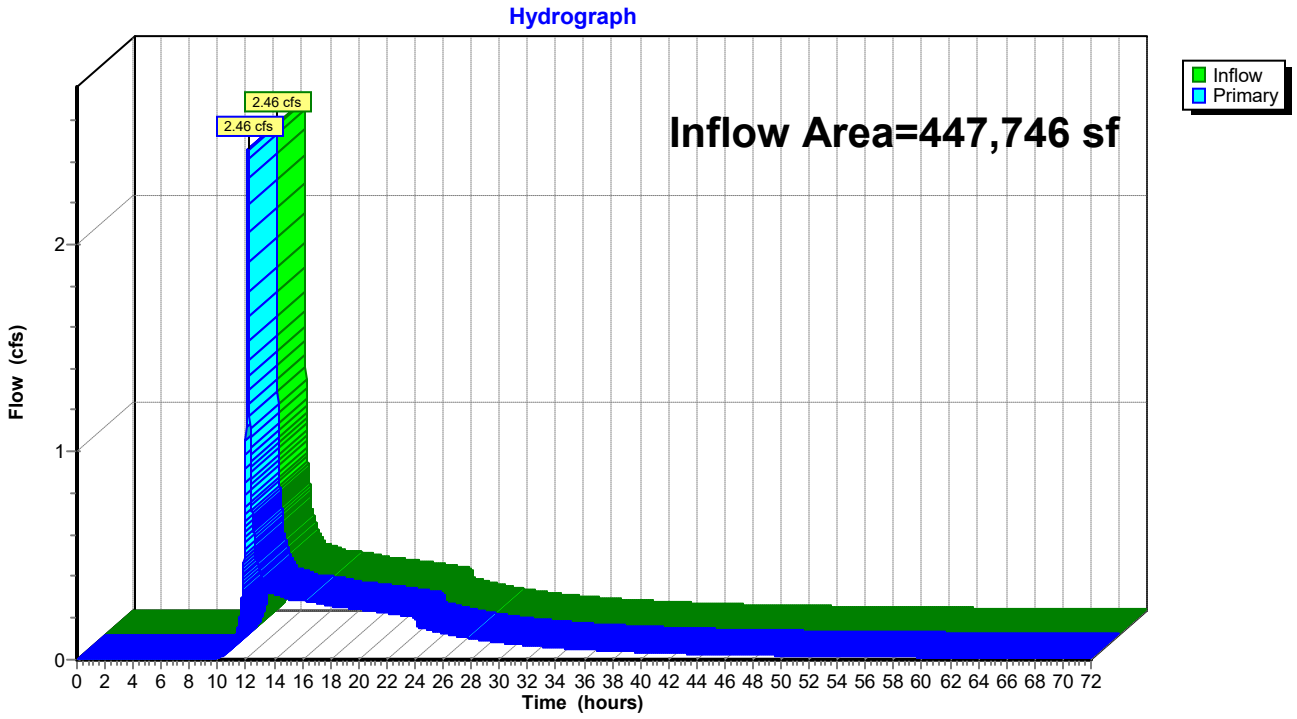
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
600.00	**35,719**	0
600.02	35,719	286
600.04	35,719	572
600.06	35,719	857
600.08	35,719	1,143
600.10	35,719	1,429
600.12	35,719	1,715
600.14	35,719	2,000
600.16	35,719	2,286
600.18	35,719	2,572
600.20	35,719	2,858
600.22	35,719	3,143
600.24	35,719	3,429
600.26	35,719	3,715
600.28	35,719	4,001
600.30	35,719	4,286
600.32	35,719	4,572
600.34	35,719	4,858
600.36	35,719	5,144
600.38	35,719	5,429
600.40	35,719	5,715
600.42	35,719	6,001
600.44	35,719	6,287
600.46	35,719	6,572
600.48	35,719	6,858
600.50	35,719	7,144
600.52	35,719	7,430
600.54	35,719	7,715
600.56	35,719	8,001
600.58	35,719	8,287
600.60	35,719	8,573
600.62	35,719	8,858
600.64	35,719	9,144
600.66	35,719	9,430
600.68	35,719	9,716
600.70	35,719	10,001
600.72	35,719	10,287
600.74	35,719	10,573
600.76	35,719	10,859
600.78	35,719	11,144
600.80	35,719	11,430
600.82	35,719	11,716
600.84	35,719	12,002
600.86	35,719	12,287
600.88	35,719	12,573
600.90	35,719	12,859
600.92	35,719	13,145
600.94	35,719	13,430
600.96	35,719	13,716
600.98	35,719	14,002
601.00	35,719	14,288
601.02	35,719	14,573
601.04	35,719	14,859
601.06	35,719	15,145
601.08	35,719	15,431
601.10	35,719	15,716
601.12	35,719	16,002
601.14	35,719	16,288
601.16	35,719	16,574
601.18	35,719	16,859
601.20	35,719	17,145
601.22	35,719	17,431
601.24	35,719	17,717
601.26	35,719	18,002
601.28	35,719	18,288
601.30	35,719	18,574
601.32	35,719	18,860
601.34	35,719	19,145
601.36	35,719	19,431
601.38	35,719	19,717
601.40	35,719	20,003
601.42	35,719	**20,288**

Summary for Link 25L: POA 1

Inflow Area = 447,746 sf, 43.41% Impervious, Inflow Depth > 0.57" for 2-Year event
Inflow = 2.46 cfs @ 12.15 hrs, Volume= 21,370 cf
Primary = 2.46 cfs @ 12.15 hrs, Volume= 21,370 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 25L: POA 1



Hydrograph for Link 25L: POA 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	51.00	0.02	0.00	0.02
1.00	0.00	0.00	0.00	52.00	0.02	0.00	0.02
2.00	0.00	0.00	0.00	53.00	0.02	0.00	0.02
3.00	0.00	0.00	0.00	54.00	0.02	0.00	0.02
4.00	0.00	0.00	0.00	55.00	0.02	0.00	0.02
5.00	0.00	0.00	0.00	56.00	0.02	0.00	0.02
6.00	0.00	0.00	0.00	57.00	0.01	0.00	0.01
7.00	0.00	0.00	0.00	58.00	0.01	0.00	0.01
8.00	0.00	0.00	0.00	59.00	0.01	0.00	0.01
9.00	0.00	0.00	0.00	60.00	0.01	0.00	0.01
10.00	0.01	0.00	0.01	61.00	0.01	0.00	0.01
11.00	0.07	0.00	0.07	62.00	0.01	0.00	0.01
12.00	**1.05**	0.00	**1.05**	63.00	0.01	0.00	0.01
13.00	**0.42**	0.00	**0.42**	64.00	0.01	0.00	0.01
14.00	0.32	0.00	0.32	65.00	0.01	0.00	0.01
15.00	0.29	0.00	0.29	66.00	0.01	0.00	0.01
16.00	0.28	0.00	0.28	67.00	0.01	0.00	0.01
17.00	0.28	0.00	0.28	68.00	0.01	0.00	0.01
18.00	0.26	0.00	0.26	69.00	0.01	0.00	0.01
19.00	0.25	0.00	0.25	70.00	0.01	0.00	0.01
20.00	0.24	0.00	0.24	71.00	0.01	0.00	0.01
21.00	0.23	0.00	0.23	72.00	0.01	0.00	0.01
22.00	0.22	0.00	0.22				
23.00	0.21	0.00	0.21				
24.00	0.20	0.00	0.20				
25.00	0.14	0.00	0.14				
26.00	0.13	0.00	0.13				
27.00	0.11	0.00	0.11				
28.00	0.10	0.00	0.10				
29.00	0.09	0.00	0.09				
30.00	0.08	0.00	0.08				
31.00	0.08	0.00	0.08				
32.00	0.07	0.00	0.07				
33.00	0.06	0.00	0.06				
34.00	0.06	0.00	0.06				
35.00	0.05	0.00	0.05				
36.00	0.05	0.00	0.05				
37.00	0.05	0.00	0.05				
38.00	0.04	0.00	0.04				
39.00	0.04	0.00	0.04				
40.00	0.04	0.00	0.04				
41.00	0.03	0.00	0.03				
42.00	0.03	0.00	0.03				
43.00	0.03	0.00	0.03				
44.00	0.03	0.00	0.03				
45.00	0.03	0.00	0.03				
46.00	0.03	0.00	0.03				
47.00	0.02	0.00	0.02				
48.00	0.02	0.00	0.02				
49.00	0.02	0.00	0.02				
50.00	0.02	0.00	0.02				

Summary for Subcatchment 14S: Basin 1 - Imp

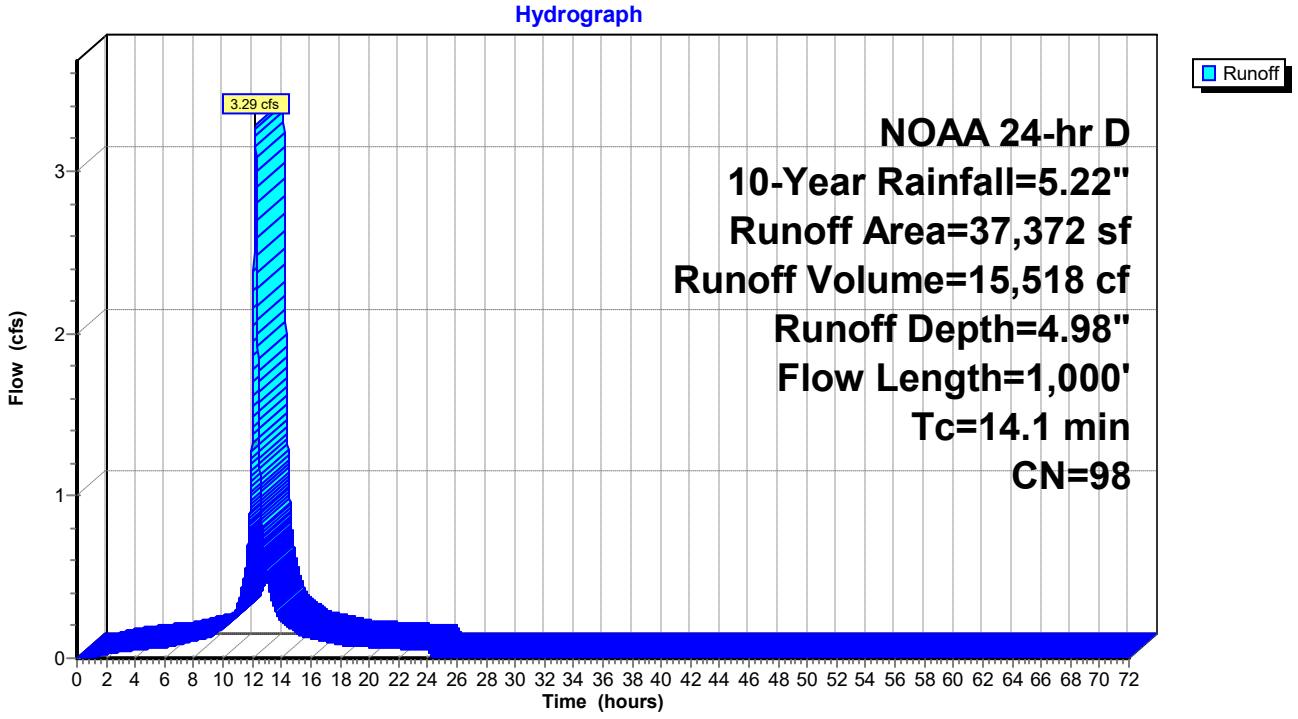
Runoff = 3.29 cfs @ 12.21 hrs, Volume= 15,518 cf, Depth= 4.98"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
8,944	98	Paved parking, HSG D
28,428	98	Paved parking, HSG C
37,372	98	Weighted Average
37,372		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 14S: Basin 1 - Imp



Hydrograph for Subcatchment 14S: Basin 1 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.02	0.03
3.00	0.20	0.07	0.04
4.00	0.27	0.12	0.05
5.00	0.36	0.19	0.06
6.00	0.45	0.27	0.07
7.00	0.55	0.36	0.09
8.00	0.68	0.48	0.11
9.00	0.83	0.63	0.13
10.00	1.03	0.82	0.19
11.00	1.36	1.14	0.33
12.00	2.50	2.27	**1.43**
13.00	3.86	3.63	**0.50**
14.00	4.19	3.95	0.23
15.00	4.39	4.16	0.16
16.00	4.54	4.31	0.12
17.00	4.67	4.43	0.10
18.00	4.77	4.54	0.08
19.00	4.86	4.63	0.08
20.00	4.95	4.71	0.07
21.00	5.02	4.79	0.07
22.00	5.09	4.86	0.06
23.00	5.16	4.92	0.06
24.00	**5.22**	**4.98**	0.05
25.00	5.22	4.98	0.00
26.00	5.22	4.98	0.00
27.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00
29.00	5.22	4.98	0.00
30.00	5.22	4.98	0.00
31.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00
33.00	5.22	4.98	0.00
34.00	5.22	4.98	0.00
35.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00
37.00	5.22	4.98	0.00
38.00	5.22	4.98	0.00
39.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00
41.00	5.22	4.98	0.00
42.00	5.22	4.98	0.00
43.00	5.22	4.98	0.00
44.00	5.22	4.98	0.00
45.00	5.22	4.98	0.00
46.00	5.22	4.98	0.00
47.00	5.22	4.98	0.00
48.00	5.22	4.98	0.00
49.00	5.22	4.98	0.00
50.00	5.22	4.98	0.00
51.00	5.22	4.98	0.00
52.00	5.22	4.98	0.00
53.00	5.22	4.98	0.00
54.00	5.22	4.98	0.00
55.00	5.22	4.98	0.00
56.00	5.22	4.98	0.00
57.00	5.22	4.98	0.00
58.00	5.22	4.98	0.00
59.00	5.22	4.98	0.00
60.00	5.22	4.98	0.00
61.00	5.22	4.98	0.00
62.00	5.22	4.98	0.00
63.00	5.22	4.98	0.00
64.00	5.22	4.98	0.00
65.00	5.22	4.98	0.00
66.00	5.22	4.98	0.00
67.00	5.22	4.98	0.00
68.00	5.22	4.98	0.00
69.00	5.22	4.98	0.00
70.00	5.22	4.98	0.00
71.00	5.22	4.98	0.00
72.00	5.22	4.98	0.00

Summary for Subcatchment 15S: Basin 1 - Perv

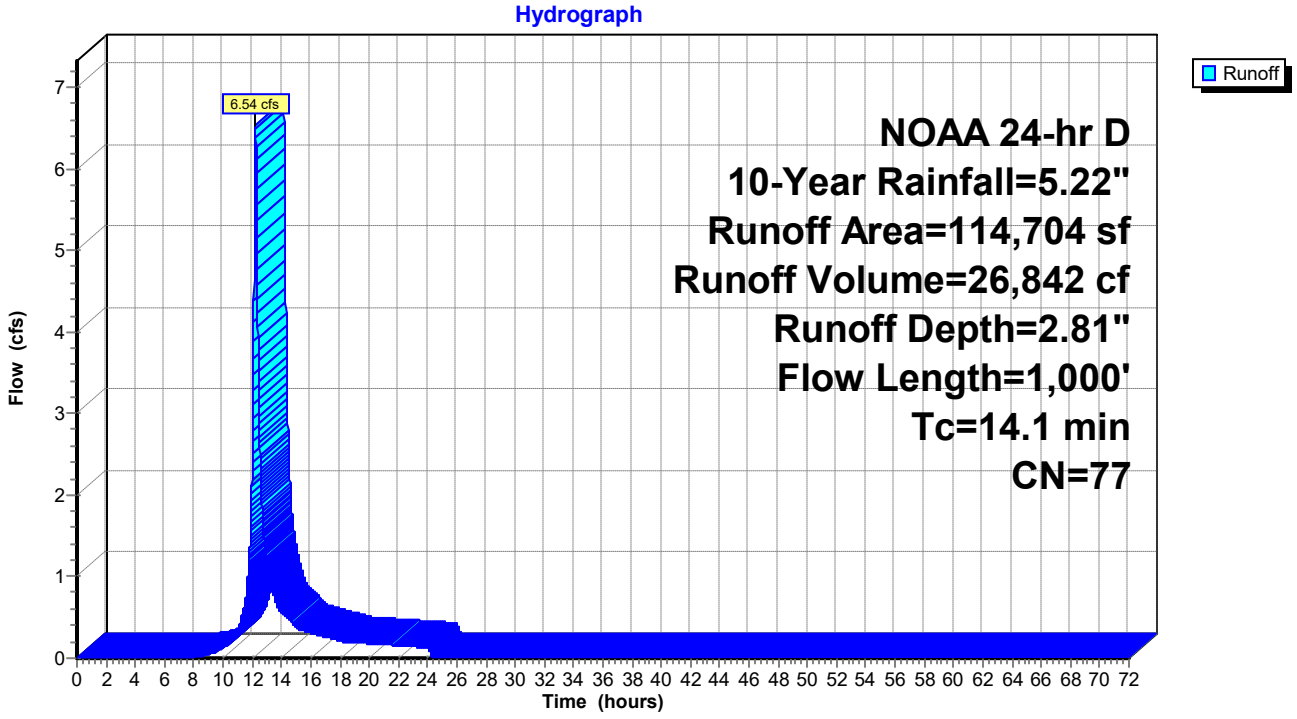
Runoff = 6.54 cfs @ 12.22 hrs, Volume= 26,842 cf, Depth= 2.81"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
65,014	80	>75% Grass cover, Good, HSG D
49,690	74	>75% Grass cover, Good, HSG C
114,704	77	Weighted Average
114,704		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 15S: Basin 1 - Perv



Hydrograph for Subcatchment 15S: Basin 1 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.55	0.00	0.00
8.00	0.68	0.00	0.01
9.00	0.83	0.02	0.05
10.00	1.03	0.06	0.13
11.00	1.36	0.15	0.34
12.00	2.50	0.74	**2.40**
13.00	3.86	1.71	**1.18**
14.00	4.19	1.96	0.56
15.00	4.39	2.12	0.39
16.00	4.54	2.25	0.31
17.00	4.67	2.35	0.26
18.00	4.77	2.44	0.21
19.00	4.86	2.51	0.19
20.00	4.95	2.58	0.18
21.00	5.02	2.64	0.17
22.00	5.09	2.70	0.16
23.00	5.16	2.76	0.14
24.00	**5.22**	**2.81**	0.13
25.00	5.22	2.81	0.00
26.00	5.22	2.81	0.00
27.00	5.22	2.81	0.00
28.00	5.22	2.81	0.00
29.00	5.22	2.81	0.00
30.00	5.22	2.81	0.00
31.00	5.22	2.81	0.00
32.00	5.22	2.81	0.00
33.00	5.22	2.81	0.00
34.00	5.22	2.81	0.00
35.00	5.22	2.81	0.00
36.00	5.22	2.81	0.00
37.00	5.22	2.81	0.00
38.00	5.22	2.81	0.00
39.00	5.22	2.81	0.00
40.00	5.22	2.81	0.00
41.00	5.22	2.81	0.00
42.00	5.22	2.81	0.00
43.00	5.22	2.81	0.00
44.00	5.22	2.81	0.00
45.00	5.22	2.81	0.00
46.00	5.22	2.81	0.00
47.00	5.22	2.81	0.00
48.00	5.22	2.81	0.00
49.00	5.22	2.81	0.00
50.00	5.22	2.81	0.00
51.00	5.22	2.81	0.00
52.00	5.22	2.81	0.00
53.00	5.22	2.81	0.00
54.00	5.22	2.81	0.00
55.00	5.22	2.81	0.00
56.00	5.22	2.81	0.00
57.00	5.22	2.81	0.00
58.00	5.22	2.81	0.00
59.00	5.22	2.81	0.00
60.00	5.22	2.81	0.00
61.00	5.22	2.81	0.00
62.00	5.22	2.81	0.00
63.00	5.22	2.81	0.00
64.00	5.22	2.81	0.00
65.00	5.22	2.81	0.00
66.00	5.22	2.81	0.00
67.00	5.22	2.81	0.00
68.00	5.22	2.81	0.00
69.00	5.22	2.81	0.00
70.00	5.22	2.81	0.00
71.00	5.22	2.81	0.00
72.00	5.22	2.81	0.00

Summary for Subcatchment 17S: Basin 5 - Imp

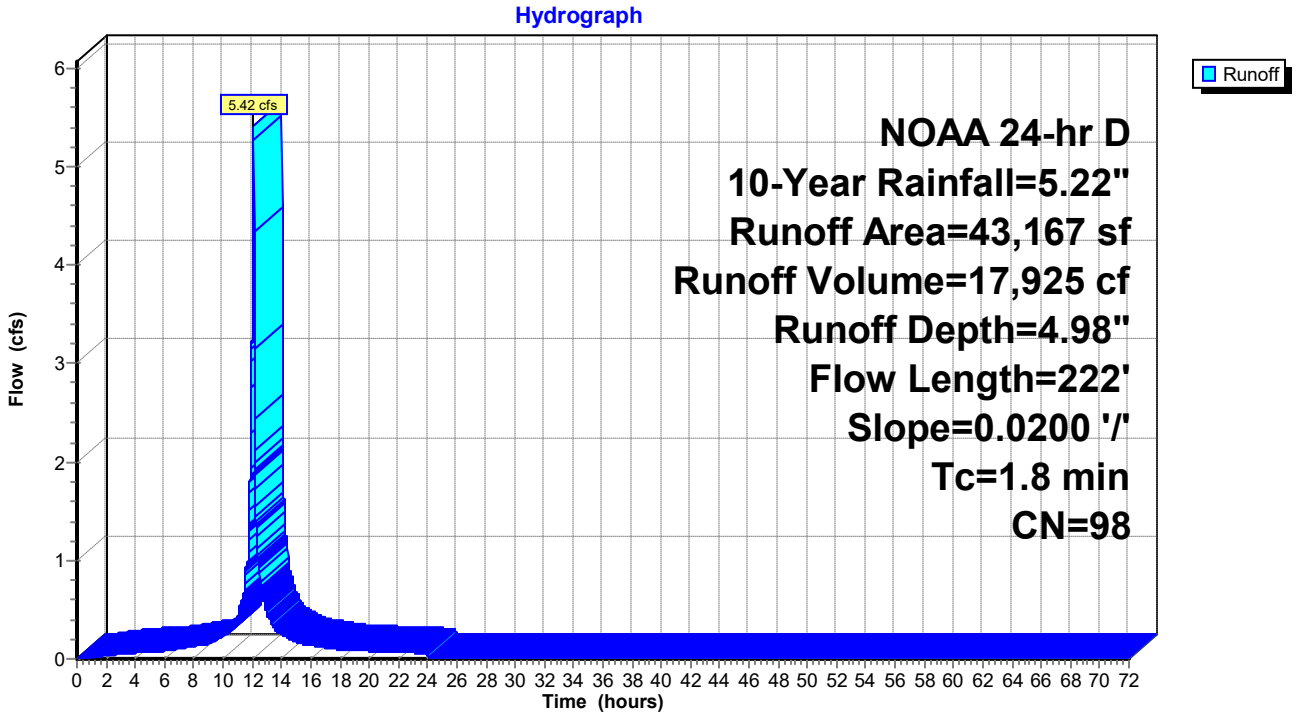
Runoff = 5.42 cfs @ 12.10 hrs, Volume= 17,925 cf, Depth= 4.98"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
26,332	98	Roofs, HSG C
16,835	98	Paved parking, HSG C
43,167	98	Weighted Average
43,167		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 17S: Basin 5 - Imp



Hydrograph for Subcatchment 17S: Basin 5 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.01
2.00	0.13	0.02	0.03
3.00	0.20	0.07	0.05
4.00	0.27	0.12	0.06
5.00	0.36	0.19	0.07
6.00	0.45	0.27	0.08
7.00	0.55	0.36	0.11
8.00	0.68	0.48	0.13
9.00	0.83	0.63	0.15
10.00	1.03	0.82	0.24
11.00	1.36	1.14	0.43
12.00	2.50	2.27	**3.24**
13.00	3.86	3.63	**0.49**
14.00	4.19	3.95	0.25
15.00	4.39	4.16	0.17
16.00	4.54	4.31	0.14
17.00	4.67	4.43	0.12
18.00	4.77	4.54	0.09
19.00	4.86	4.63	0.09
20.00	4.95	4.71	0.08
21.00	5.02	4.79	0.07
22.00	5.09	4.86	0.07
23.00	5.16	4.92	0.06
24.00	**5.22**	**4.98**	0.06
25.00	5.22	4.98	0.00
26.00	5.22	4.98	0.00
27.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00
29.00	5.22	4.98	0.00
30.00	5.22	4.98	0.00
31.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00
33.00	5.22	4.98	0.00
34.00	5.22	4.98	0.00
35.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00
37.00	5.22	4.98	0.00
38.00	5.22	4.98	0.00
39.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00
41.00	5.22	4.98	0.00
42.00	5.22	4.98	0.00
43.00	5.22	4.98	0.00
44.00	5.22	4.98	0.00
45.00	5.22	4.98	0.00
46.00	5.22	4.98	0.00
47.00	5.22	4.98	0.00
48.00	5.22	4.98	0.00
49.00	5.22	4.98	0.00
50.00	5.22	4.98	0.00
51.00	5.22	4.98	0.00
52.00	5.22	4.98	0.00
53.00	5.22	4.98	0.00
54.00	5.22	4.98	0.00
55.00	5.22	4.98	0.00
56.00	5.22	4.98	0.00
57.00	5.22	4.98	0.00
58.00	5.22	4.98	0.00
59.00	5.22	4.98	0.00
60.00	5.22	4.98	0.00
61.00	5.22	4.98	0.00
62.00	5.22	4.98	0.00
63.00	5.22	4.98	0.00
64.00	5.22	4.98	0.00
65.00	5.22	4.98	0.00
66.00	5.22	4.98	0.00
67.00	5.22	4.98	0.00
68.00	5.22	4.98	0.00
69.00	5.22	4.98	0.00
70.00	5.22	4.98	0.00
71.00	5.22	4.98	0.00
72.00	5.22	4.98	0.00

Summary for Subcatchment 22S: Basin 6 - Imp

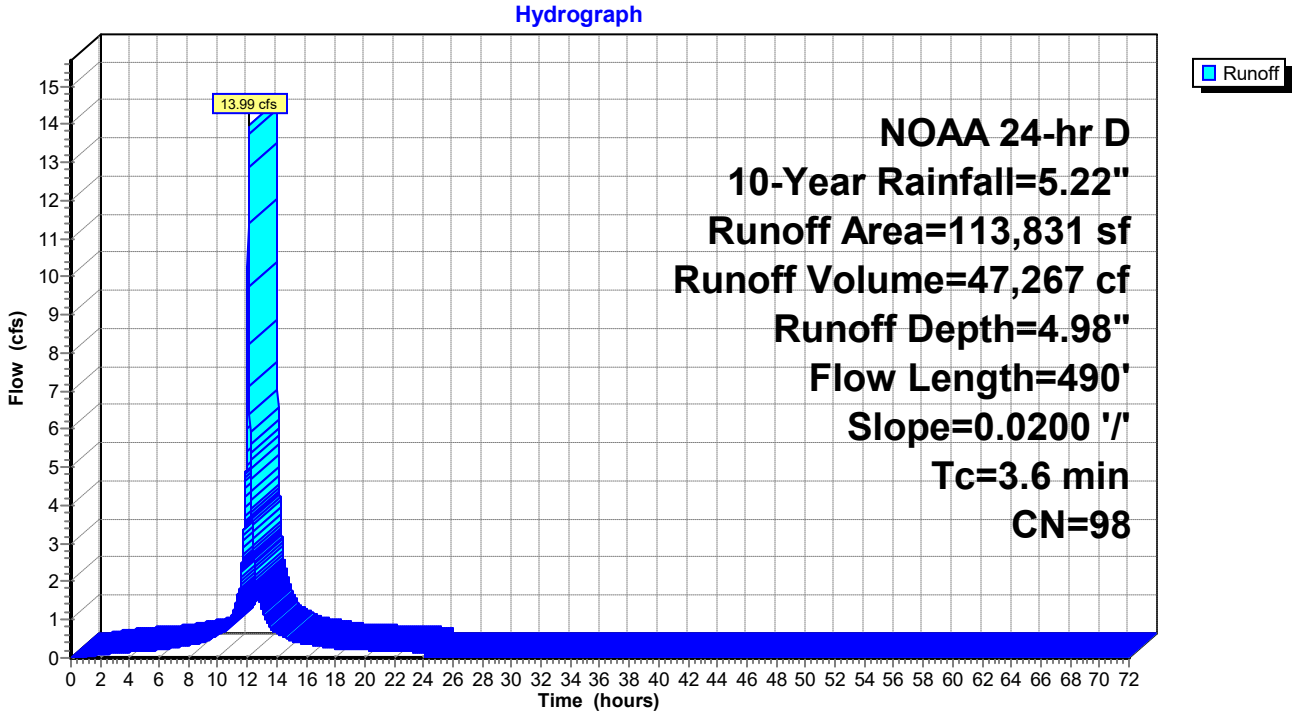
Runoff = 13.99 cfs @ 12.11 hrs, Volume= 47,267 cf, Depth= 4.98"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
10,890	98	Roofs, HSG D
26,136	98	Paved parking, HSG D
41,818	98	Roofs, HSG C
34,987	98	Paved parking, HSG C
113,831	98	Weighted Average
113,831		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 22S: Basin 6 - Imp



Hydrograph for Subcatchment 22S: Basin 6 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.02
2.00	0.13	0.02	0.09
3.00	0.20	0.07	0.13
4.00	0.27	0.12	0.16
5.00	0.36	0.19	0.19
6.00	0.45	0.27	0.21
7.00	0.55	0.36	0.28
8.00	0.68	0.48	0.34
9.00	0.83	0.63	0.41
10.00	1.03	0.82	0.62
11.00	1.36	1.14	1.12
12.00	2.50	2.27	**8.30**
13.00	3.86	3.63	**1.30**
14.00	4.19	3.95	0.66
15.00	4.39	4.16	0.45
16.00	4.54	4.31	0.37
17.00	4.67	4.43	0.31
18.00	4.77	4.54	0.25
19.00	4.86	4.63	0.23
20.00	4.95	4.71	0.21
21.00	5.02	4.79	0.20
22.00	5.09	4.86	0.18
23.00	5.16	4.92	0.17
24.00	**5.22**	**4.98**	0.15
25.00	5.22	4.98	0.00
26.00	5.22	4.98	0.00
27.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00
29.00	5.22	4.98	0.00
30.00	5.22	4.98	0.00
31.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00
33.00	5.22	4.98	0.00
34.00	5.22	4.98	0.00
35.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00
37.00	5.22	4.98	0.00
38.00	5.22	4.98	0.00
39.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00
41.00	5.22	4.98	0.00
42.00	5.22	4.98	0.00
43.00	5.22	4.98	0.00
44.00	5.22	4.98	0.00
45.00	5.22	4.98	0.00
46.00	5.22	4.98	0.00
47.00	5.22	4.98	0.00
48.00	5.22	4.98	0.00
49.00	5.22	4.98	0.00
50.00	5.22	4.98	0.00
51.00	5.22	4.98	0.00
52.00	5.22	4.98	0.00
53.00	5.22	4.98	0.00
54.00	5.22	4.98	0.00
55.00	5.22	4.98	0.00
56.00	5.22	4.98	0.00
57.00	5.22	4.98	0.00
58.00	5.22	4.98	0.00
59.00	5.22	4.98	0.00
60.00	5.22	4.98	0.00
61.00	5.22	4.98	0.00
62.00	5.22	4.98	0.00
63.00	5.22	4.98	0.00
64.00	5.22	4.98	0.00
65.00	5.22	4.98	0.00
66.00	5.22	4.98	0.00
67.00	5.22	4.98	0.00
68.00	5.22	4.98	0.00
69.00	5.22	4.98	0.00
70.00	5.22	4.98	0.00
71.00	5.22	4.98	0.00
72.00	5.22	4.98	0.00

Summary for Subcatchment 23S: Basin 6 - Perv

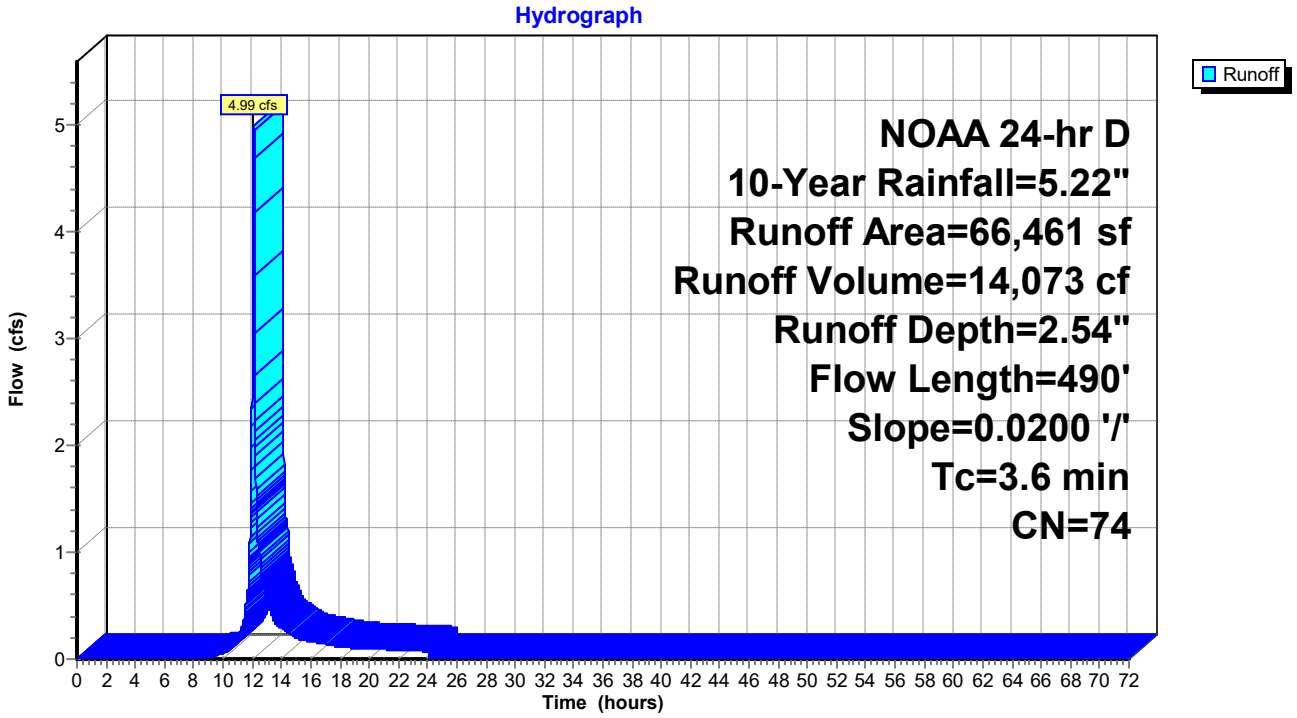
Runoff = 4.99 cfs @ 12.11 hrs, Volume= 14,073 cf, Depth= 2.54"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
66,461	74	>75% Grass cover, Good, HSG C
66,461		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 23S: Basin 6 - Perv



Hydrograph for Subcatchment 23S: Basin 6 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.55	0.00	0.00
8.00	0.68	0.00	0.00
9.00	0.83	0.00	0.02
10.00	1.03	0.03	0.06
11.00	1.36	0.10	0.19
12.00	2.50	0.61	**2.60**
13.00	3.86	1.50	**0.55**
14.00	4.19	1.73	0.29
15.00	4.39	1.89	0.20
16.00	4.54	2.01	0.17
17.00	4.67	2.10	0.14
18.00	4.77	2.19	0.11
19.00	4.86	2.26	0.10
20.00	4.95	2.32	0.10
21.00	5.02	2.38	0.09
22.00	5.09	2.44	0.09
23.00	5.16	2.49	0.08
24.00	**5.22**	**2.54**	0.07
25.00	5.22	2.54	0.00
26.00	5.22	2.54	0.00
27.00	5.22	2.54	0.00
28.00	5.22	2.54	0.00
29.00	5.22	2.54	0.00
30.00	5.22	2.54	0.00
31.00	5.22	2.54	0.00
32.00	5.22	2.54	0.00
33.00	5.22	2.54	0.00
34.00	5.22	2.54	0.00
35.00	5.22	2.54	0.00
36.00	5.22	2.54	0.00
37.00	5.22	2.54	0.00
38.00	5.22	2.54	0.00
39.00	5.22	2.54	0.00
40.00	5.22	2.54	0.00
41.00	5.22	2.54	0.00
42.00	5.22	2.54	0.00
43.00	5.22	2.54	0.00
44.00	5.22	2.54	0.00
45.00	5.22	2.54	0.00
46.00	5.22	2.54	0.00
47.00	5.22	2.54	0.00
48.00	5.22	2.54	0.00
49.00	5.22	2.54	0.00
50.00	5.22	2.54	0.00
51.00	5.22	2.54	0.00
52.00	5.22	2.54	0.00
53.00	5.22	2.54	0.00
54.00	5.22	2.54	0.00
55.00	5.22	2.54	0.00
56.00	5.22	2.54	0.00
57.00	5.22	2.54	0.00
58.00	5.22	2.54	0.00
59.00	5.22	2.54	0.00
60.00	5.22	2.54	0.00
61.00	5.22	2.54	0.00
62.00	5.22	2.54	0.00
63.00	5.22	2.54	0.00
64.00	5.22	2.54	0.00
65.00	5.22	2.54	0.00
66.00	5.22	2.54	0.00
67.00	5.22	2.54	0.00
68.00	5.22	2.54	0.00
69.00	5.22	2.54	0.00
70.00	5.22	2.54	0.00
71.00	5.22	2.54	0.00
72.00	5.22	2.54	0.00

Summary for Subcatchment 26S: DA 1 Und - Perv

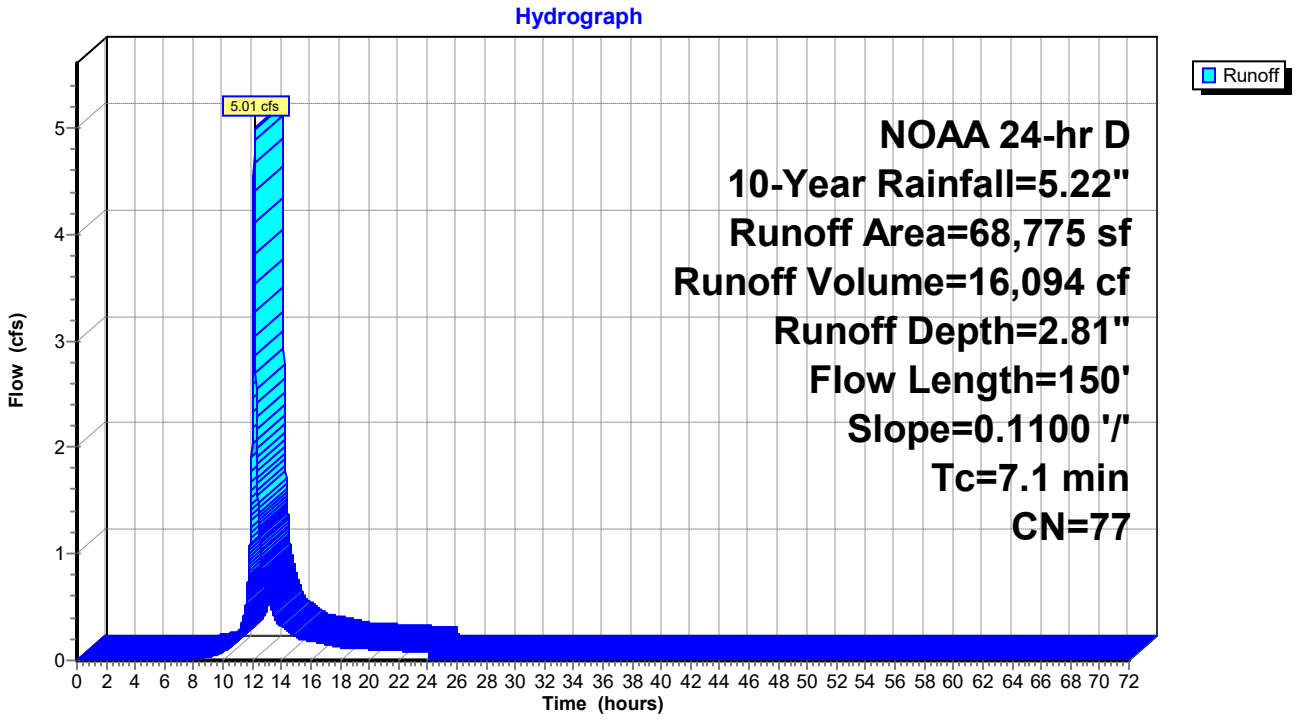
Runoff = 5.01 cfs @ 12.14 hrs, Volume= 16,094 cf, Depth= 2.81"
Routed to Link 25L : POA 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
34,475	80	>75% Grass cover, Good, HSG D
34,300	74	>75% Grass cover, Good, HSG C
68,775	77	Weighted Average
68,775		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	50	0.1100	5.34		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.1	150	Total			

Subcatchment 26S: DA 1 Und - Perv



Hydrograph for Subcatchment 26S: DA 1 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.55	0.00	0.00
8.00	0.68	0.00	0.01
9.00	0.83	0.02	0.03
10.00	1.03	0.06	0.09
11.00	1.36	0.15	0.23
12.00	2.50	0.74	**2.33**
13.00	3.86	1.71	**0.64**
14.00	4.19	1.96	0.32
15.00	4.39	2.12	0.22
16.00	4.54	2.25	0.18
17.00	4.67	2.35	0.15
18.00	4.77	2.44	0.13
19.00	4.86	2.51	0.11
20.00	4.95	2.58	0.11
21.00	5.02	2.64	0.10
22.00	5.09	2.70	0.09
23.00	5.16	2.76	0.08
24.00	**5.22**	**2.81**	0.08
25.00	5.22	2.81	0.00
26.00	5.22	2.81	0.00
27.00	5.22	2.81	0.00
28.00	5.22	2.81	0.00
29.00	5.22	2.81	0.00
30.00	5.22	2.81	0.00
31.00	5.22	2.81	0.00
32.00	5.22	2.81	0.00
33.00	5.22	2.81	0.00
34.00	5.22	2.81	0.00
35.00	5.22	2.81	0.00
36.00	5.22	2.81	0.00
37.00	5.22	2.81	0.00
38.00	5.22	2.81	0.00
39.00	5.22	2.81	0.00
40.00	5.22	2.81	0.00
41.00	5.22	2.81	0.00
42.00	5.22	2.81	0.00
43.00	5.22	2.81	0.00
44.00	5.22	2.81	0.00
45.00	5.22	2.81	0.00
46.00	5.22	2.81	0.00
47.00	5.22	2.81	0.00
48.00	5.22	2.81	0.00
49.00	5.22	2.81	0.00
50.00	5.22	2.81	0.00
51.00	5.22	2.81	0.00
52.00	5.22	2.81	0.00
53.00	5.22	2.81	0.00
54.00	5.22	2.81	0.00
55.00	5.22	2.81	0.00
56.00	5.22	2.81	0.00
57.00	5.22	2.81	0.00
58.00	5.22	2.81	0.00
59.00	5.22	2.81	0.00
60.00	5.22	2.81	0.00
61.00	5.22	2.81	0.00
62.00	5.22	2.81	0.00
63.00	5.22	2.81	0.00
64.00	5.22	2.81	0.00
65.00	5.22	2.81	0.00
66.00	5.22	2.81	0.00
67.00	5.22	2.81	0.00
68.00	5.22	2.81	0.00
69.00	5.22	2.81	0.00
70.00	5.22	2.81	0.00
71.00	5.22	2.81	0.00
72.00	5.22	2.81	0.00

Summary for Subcatchment 27S: Basin 5 - Perv

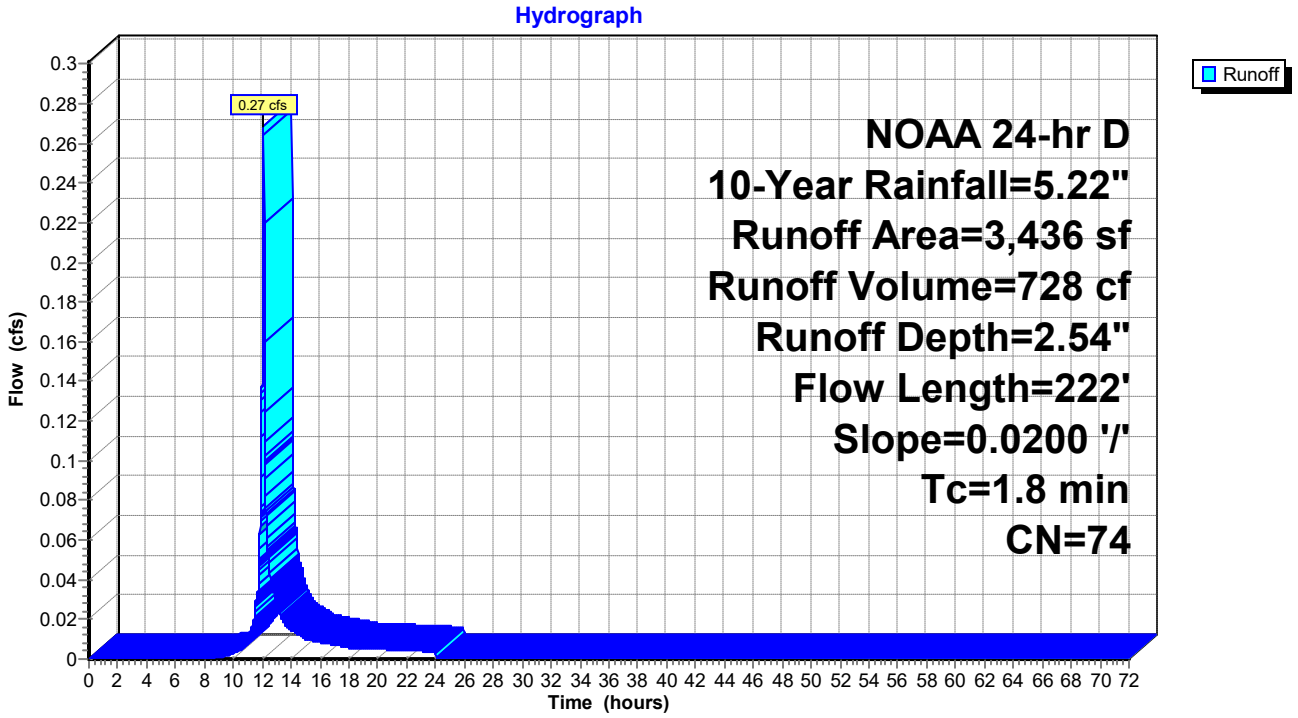
Runoff = 0.27 cfs @ 12.10 hrs, Volume= 728 cf, Depth= 2.54"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
3,436	74	>75% Grass cover, Good, HSG C
3,436		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 27S: Basin 5 - Perv



Hydrograph for Subcatchment 27S: Basin 5 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.55	0.00	0.00
8.00	0.68	0.00	0.00
9.00	0.83	0.00	0.00
10.00	1.03	0.03	0.00
11.00	1.36	0.10	0.01
12.00	2.50	0.61	**0.14**
13.00	3.86	1.50	**0.03**
14.00	4.19	1.73	0.01
15.00	4.39	1.89	0.01
16.00	4.54	2.01	0.01
17.00	4.67	2.10	0.01
18.00	4.77	2.19	0.01
19.00	4.86	2.26	0.01
20.00	4.95	2.32	0.01
21.00	5.02	2.38	0.00
22.00	5.09	2.44	0.00
23.00	5.16	2.49	0.00
24.00	**5.22**	**2.54**	0.00
25.00	5.22	2.54	0.00
26.00	5.22	2.54	0.00
27.00	5.22	2.54	0.00
28.00	5.22	2.54	0.00
29.00	5.22	2.54	0.00
30.00	5.22	2.54	0.00
31.00	5.22	2.54	0.00
32.00	5.22	2.54	0.00
33.00	5.22	2.54	0.00
34.00	5.22	2.54	0.00
35.00	5.22	2.54	0.00
36.00	5.22	2.54	0.00
37.00	5.22	2.54	0.00
38.00	5.22	2.54	0.00
39.00	5.22	2.54	0.00
40.00	5.22	2.54	0.00
41.00	5.22	2.54	0.00
42.00	5.22	2.54	0.00
43.00	5.22	2.54	0.00
44.00	5.22	2.54	0.00
45.00	5.22	2.54	0.00
46.00	5.22	2.54	0.00
47.00	5.22	2.54	0.00
48.00	5.22	2.54	0.00
49.00	5.22	2.54	0.00
50.00	5.22	2.54	0.00
51.00	5.22	2.54	0.00
52.00	5.22	2.54	0.00
53.00	5.22	2.54	0.00
54.00	5.22	2.54	0.00
55.00	5.22	2.54	0.00
56.00	5.22	2.54	0.00
57.00	5.22	2.54	0.00
58.00	5.22	2.54	0.00
59.00	5.22	2.54	0.00
60.00	5.22	2.54	0.00
61.00	5.22	2.54	0.00
62.00	5.22	2.54	0.00
63.00	5.22	2.54	0.00
64.00	5.22	2.54	0.00
65.00	5.22	2.54	0.00
66.00	5.22	2.54	0.00
67.00	5.22	2.54	0.00
68.00	5.22	2.54	0.00
69.00	5.22	2.54	0.00
70.00	5.22	2.54	0.00
71.00	5.22	2.54	0.00
72.00	5.22	2.54	0.00

Summary for Pond 16P: Basin 1

Inflow Area = 378,971 sf, 51.29% Impervious, Inflow Depth = 1.43" for 10-Year event
Inflow = 13.05 cfs @ 12.20 hrs, Volume= 45,251 cf
Outflow = 0.60 cfs @ 14.80 hrs, Volume= 35,148 cf, Atten= 95%, Lag= 155.8 min
Primary = 0.60 cfs @ 14.80 hrs, Volume= 35,148 cf
Routed to Link 25L : POA 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 544.40' @ 14.80 hrs Surf.Area= 34,414 sf Storage= 30,179 cf

Plug-Flow detention time= 718.0 min calculated for 35,148 cf (78% of inflow)
Center-of-Mass det. time= 629.5 min (1,436.9 - 807.3)

Volume	Invert	Avail.Storage	Storage Description
#1	543.50'	126,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

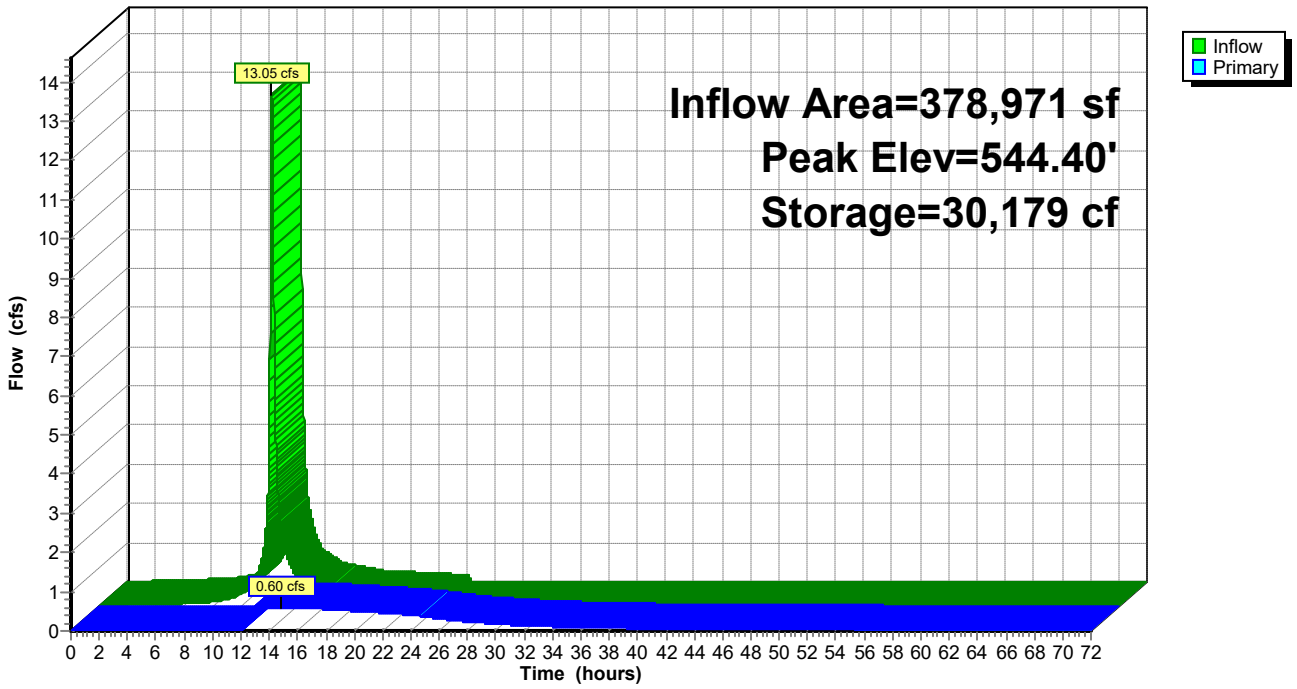
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
543.50	32,670	0	0
544.00	33,541	16,553	16,553
545.00	35,719	34,630	51,183
546.00	37,897	36,808	87,991
547.00	39,640	38,769	126,759

Device	Routing	Invert	Outlet Devices
#1	Primary	546.00'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	543.75'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.60 cfs @ 14.80 hrs HW=544.40' (Free Discharge)
1=Grate (Controls 0.00 cfs)
2=Orifice (Orifice Controls 0.60 cfs @ 3.05 fps)

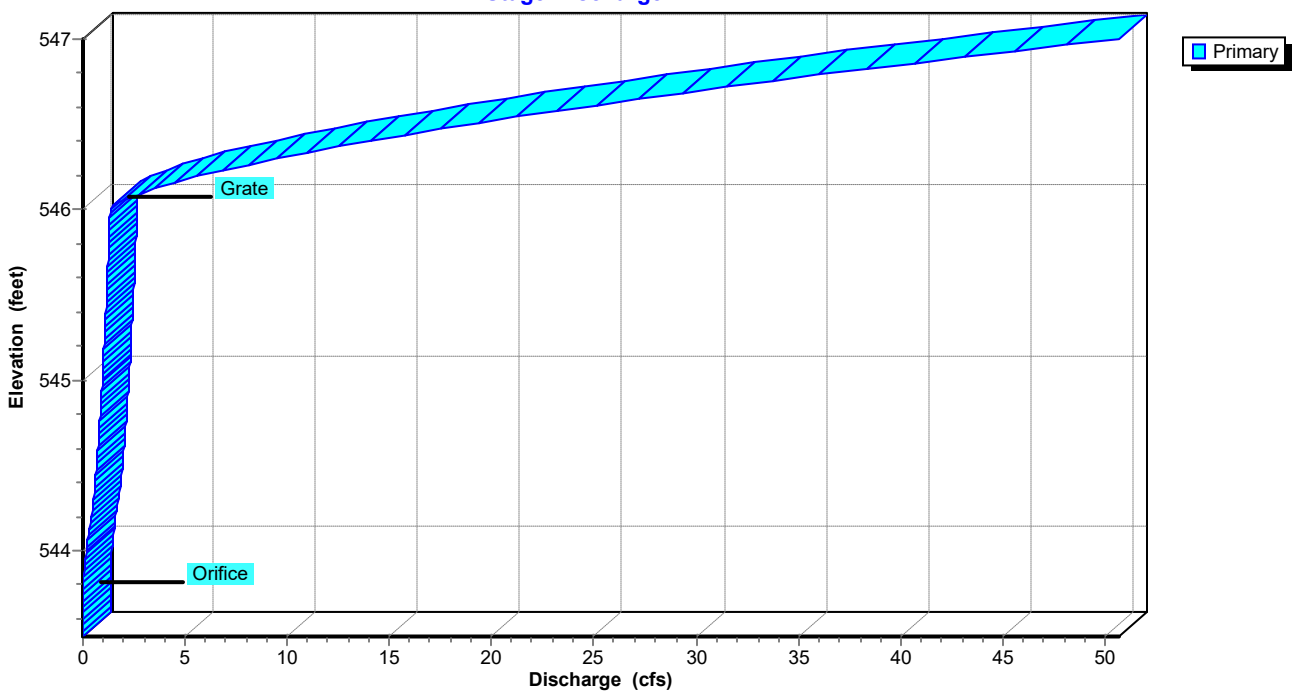
Pond 16P: Basin 1

Hydrograph



Pond 16P: Basin 1

Stage-Discharge



Hydrograph for Pond 16P: Basin 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	543.50	0.00
2.00	0.03	56	543.50	0.00
4.00	0.05	345	543.51	0.00
6.00	0.07	784	543.52	0.00
8.00	0.12	1,423	543.54	0.00
10.00	0.32	2,836	543.59	0.00
12.00	**3.88**	9,718	543.80	0.01
14.00	**0.79**	**29,900**	**544.39**	**0.59**
16.00	0.44	**29,737**	**544.39**	**0.59**
18.00	0.30	28,252	544.34	0.56
20.00	0.25	26,353	544.29	0.51
22.00	0.22	24,538	544.24	0.46
24.00	0.18	22,827	544.19	0.41
26.00	0.00	20,364	544.11	0.31
28.00	0.00	18,401	544.05	0.24
30.00	0.00	16,914	544.01	0.18
32.00	0.00	15,768	543.98	0.14
34.00	0.00	14,866	543.95	0.11
36.00	0.00	14,141	543.93	0.09
38.00	0.00	13,551	543.91	0.07
40.00	0.00	13,060	543.90	0.06
42.00	0.00	12,649	543.88	0.05
44.00	0.00	12,298	543.87	0.05
46.00	0.00	11,994	543.86	0.04
48.00	0.00	11,732	543.86	0.03
50.00	0.00	11,504	543.85	0.03
52.00	0.00	11,302	543.84	0.03
54.00	0.00	11,121	543.84	0.02
56.00	0.00	10,957	543.83	0.02
58.00	0.00	10,810	543.83	0.02
60.00	0.00	10,678	543.82	0.02
62.00	0.00	10,559	543.82	0.02
64.00	0.00	10,451	543.82	0.01
66.00	0.00	10,355	543.81	0.01
68.00	0.00	10,265	543.81	0.01
70.00	0.00	10,181	543.81	0.01
72.00	0.00	10,103	543.81	0.01

Stage-Discharge for Pond 16P: Basin 1

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
543.50	0.00	544.52	0.68	545.54	1.17	546.56	22.07
543.52	0.00	544.54	0.69	545.56	1.18	546.58	23.18
543.54	0.00	544.56	0.71	545.58	1.19	546.60	24.32
543.56	0.00	544.58	0.72	545.60	1.20	546.62	25.48
543.58	0.00	544.60	0.73	545.62	1.20	546.64	26.65
543.60	0.00	544.62	0.74	545.64	1.21	546.66	27.84
543.62	0.00	544.64	0.76	545.66	1.22	546.68	29.05
543.64	0.00	544.66	0.77	545.68	1.23	546.70	30.28
543.66	0.00	544.68	0.78	545.70	1.23	546.72	31.53
543.68	0.00	544.70	0.79	545.72	1.24	546.74	32.79
543.70	0.00	544.72	0.80	545.74	1.25	546.76	34.07
543.72	0.00	544.74	0.81	545.76	1.25	546.78	35.37
543.74	0.00	544.76	0.82	545.78	1.26	546.80	36.68
543.76	0.00	544.78	0.83	545.80	1.27	546.82	38.01
543.78	0.00	544.80	0.85	545.82	1.28	546.84	39.36
543.80	0.01	544.82	0.86	545.84	1.28	546.86	40.72
543.82	0.02	544.84	0.87	545.86	1.29	546.88	42.10
543.84	0.02	544.86	0.88	545.88	1.30	546.90	43.49
543.86	0.04	544.88	0.89	545.90	1.30	546.92	44.90
543.88	0.05	544.90	0.90	545.92	1.31	546.94	46.32
543.90	0.07	544.92	0.91	545.94	1.32	546.96	47.76
543.92	0.08	544.94	0.92	545.96	1.32	546.98	49.22
543.94	0.10	544.96	0.93	545.98	1.33	547.00	**50.69**
543.96	0.12	544.98	0.94	546.00	1.34		
543.98	0.14	545.00	0.95	546.02	1.48		
544.00	0.17	545.02	0.95	546.04	1.74		
544.02	0.19	545.04	0.96	546.06	2.08		
544.04	0.22	545.06	0.97	546.08	2.47		
544.06	0.24	545.08	0.98	546.10	2.92		
544.08	0.27	545.10	0.99	546.12	3.42		
544.10	0.30	545.12	1.00	546.14	3.95		
544.12	0.32	545.14	1.01	546.16	4.53		
544.14	0.35	545.16	1.02	546.18	5.14		
544.16	0.38	545.18	1.03	546.20	5.79		
544.18	0.40	545.20	1.04	546.22	6.47		
544.20	0.43	545.22	1.04	546.24	7.18		
544.22	0.45	545.24	1.05	546.26	7.92		
544.24	0.47	545.26	1.06	546.28	8.69		
544.26	0.48	545.28	1.07	546.30	9.49		
544.28	0.50	545.30	1.08	546.32	10.32		
544.30	0.52	545.32	1.09	546.34	11.17		
544.32	0.53	545.34	1.09	546.36	12.05		
544.34	0.55	545.36	1.10	546.38	12.95		
544.36	0.57	545.38	1.11	546.40	13.87		
544.38	0.58	545.40	1.12	546.42	14.82		
544.40	0.60	545.42	1.13	546.44	15.79		
544.42	0.61	545.44	1.13	546.46	16.79		
544.44	0.63	545.46	1.14	546.48	17.80		
544.46	0.64	545.48	1.15	546.50	18.84		
544.48	0.66	545.50	1.16	546.52	19.89		
544.50	0.67	545.52	1.17	546.54	20.97		

Stage-Area-Storage for Pond 16P: Basin 1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
543.50	32,670	0
543.55	32,757	1,636
543.60	32,844	3,276
543.65	32,931	4,920
543.70	33,018	6,569
543.75	33,106	8,222
543.80	33,193	9,879
543.85	33,280	11,541
543.90	33,367	13,207
543.95	33,454	14,878
544.00	33,541	16,553
544.05	33,650	18,233
544.10	33,759	19,918
544.15	33,868	21,608
544.20	33,977	23,305
544.25	34,086	25,006
544.30	34,194	26,713
544.35	34,303	28,426
544.40	34,412	30,143
544.45	34,521	31,867
544.50	34,630	33,596
544.55	34,739	35,330
544.60	34,848	37,069
544.65	34,957	38,815
544.70	35,066	40,565
544.75	35,175	42,321
544.80	35,283	44,083
544.85	35,392	45,849
544.90	35,501	47,622
544.95	35,610	49,400
545.00	35,719	51,183
545.05	35,828	52,971
545.10	35,937	54,766
545.15	36,046	56,565
545.20	36,155	58,370
545.25	36,264	60,181
545.30	36,372	61,996
545.35	36,481	63,818
545.40	36,590	65,645
545.45	36,699	67,477
545.50	36,808	69,315
545.55	36,917	71,158
545.60	37,026	73,006
545.65	37,135	74,860
545.70	37,244	76,720
545.75	37,353	78,585
545.80	37,461	80,455
545.85	37,570	82,331
545.90	37,679	84,212
545.95	37,788	86,099
546.00	37,897	87,991
546.05	37,984	89,888
546.10	38,071	91,789
546.15	38,158	93,695
546.20	38,246	95,605
546.25	38,333	97,519
546.30	38,420	99,438
546.35	38,507	101,361
546.40	38,594	103,289
546.45	38,681	105,221
546.50	38,769	107,157
546.55	38,856	109,098
546.60	38,943	111,043
546.65	39,030	112,992
546.70	39,117	114,946
546.75	39,204	116,904
546.80	39,291	118,866
546.85	39,379	120,833
546.90	39,466	122,804
546.95	39,553	124,779
547.00	**39,640**	**126,759**

Summary for Pond 18P: Basin 5

Inflow Area = 46,603 sf, 92.63% Impervious, Inflow Depth = 4.80" for 10-Year event
Inflow = 5.69 cfs @ 12.10 hrs, Volume= 18,652 cf
Outflow = 2.43 cfs @ 12.14 hrs, Volume= 18,652 cf, Atten= 57%, Lag= 2.7 min
Discarded = 1.37 cfs @ 11.84 hrs, Volume= 17,615 cf
Primary = 1.06 cfs @ 12.14 hrs, Volume= 1,037 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 579.44' @ 12.14 hrs Surf.Area= 14,810 sf Storage= 2,595 cf

Plug-Flow detention time= 8.1 min calculated for 18,649 cf (100% of inflow)
Center-of-Mass det. time= 8.1 min (756.5 - 748.4)

Volume	Invert	Avail.Storage	Storage Description
#1	579.00'	31,397 cf	**Custom Stage Data (Prismatic)** Listed below 78,493 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
579.00	14,810	0	0
580.00	14,810	14,810	14,810
581.00	14,810	14,810	29,620
582.00	14,810	14,810	44,430
583.00	14,810	14,810	59,240
584.00	14,810	14,810	74,050
584.30	14,810	4,443	78,493

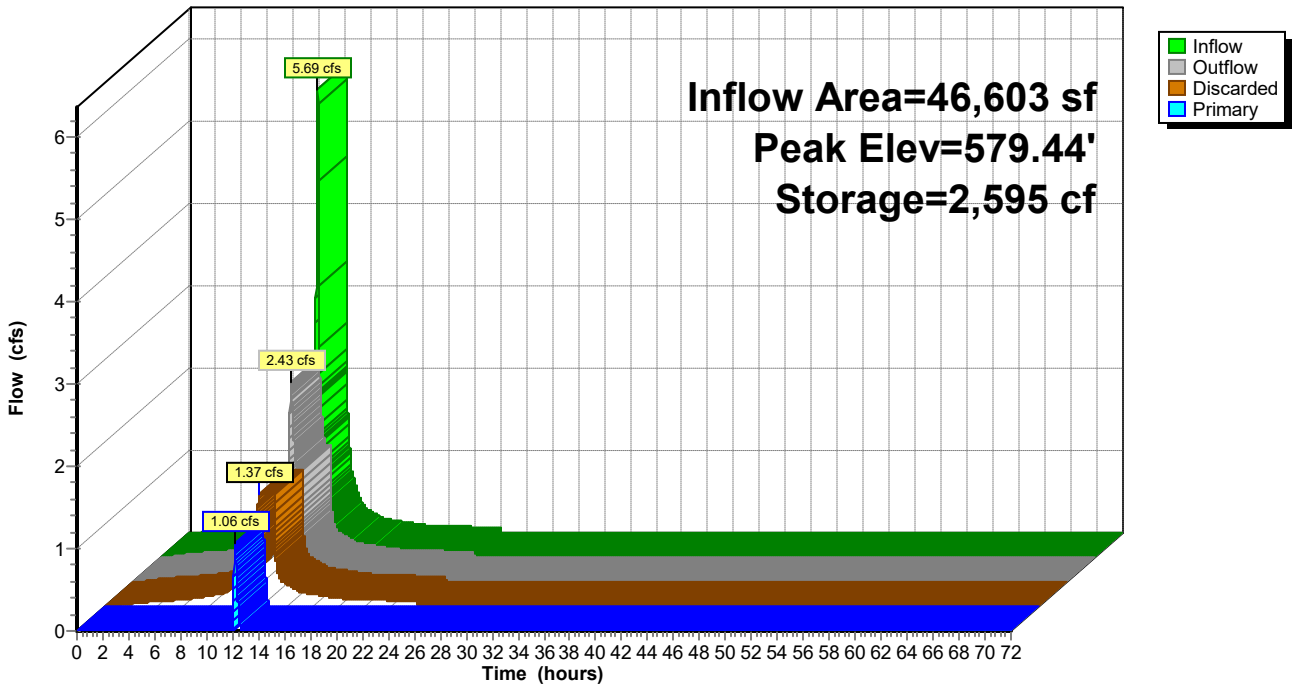
Device	Routing	Invert	Outlet Devices
#1	Primary	579.25'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	579.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=1.37 cfs @ 11.84 hrs HW=579.06' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.37 cfs)

Primary OutFlow Max=1.05 cfs @ 12.14 hrs HW=579.44' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 1.05 cfs @ 1.42 fps)

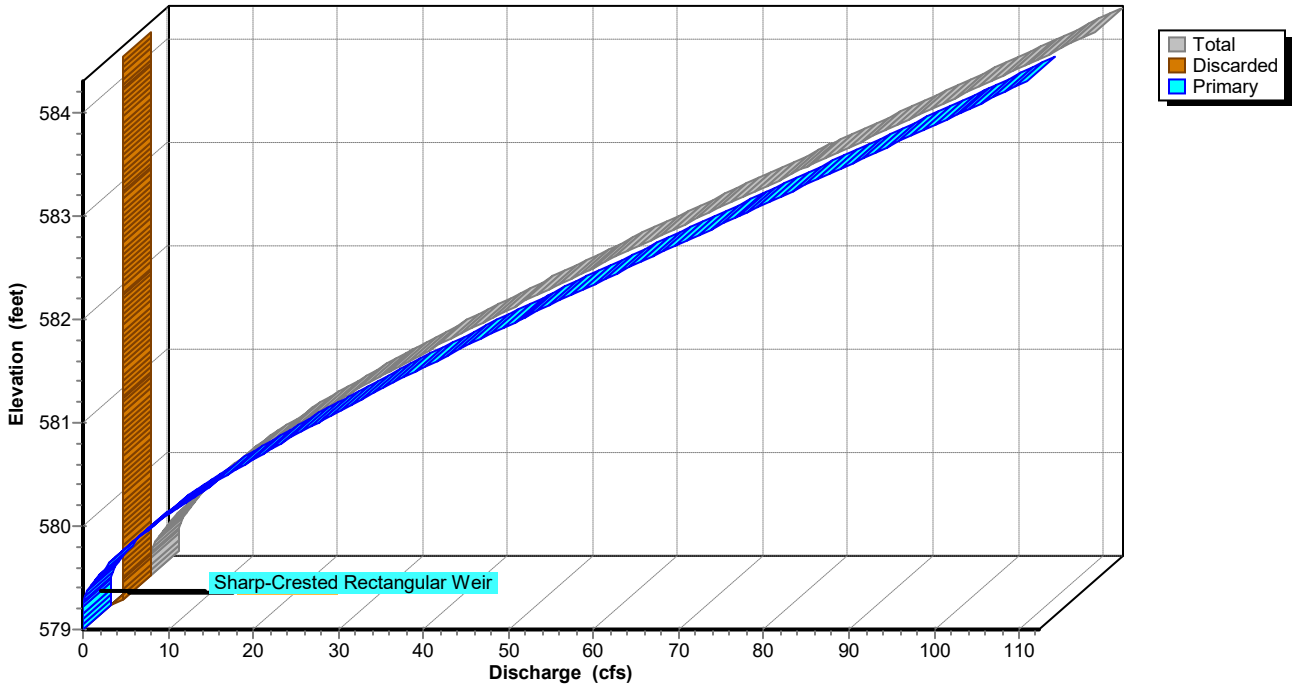
Pond 18P: Basin 5

Hydrograph



Pond 18P: Basin 5

Stage-Discharge



Hydrograph for Pond 18P: Basin 5

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	579.00	0.00	0.00	0.00
2.00	0.03	7	579.00	0.03	0.03	0.00
4.00	0.06	14	579.00	0.06	0.06	0.00
6.00	0.08	18	579.00	0.08	0.08	0.00
8.00	0.13	29	579.00	0.13	0.13	0.00
10.00	0.24	54	579.01	0.24	**0.24**	0.00
12.00	**3.38**	**1,028**	**579.17**	**1.37**	**1.37**	**0.00**
14.00	**0.27**	**62**	**579.01**	**0.27**	0.27	**0.00**
16.00	0.15	34	579.01	0.15	0.15	0.00
18.00	0.10	23	579.00	0.10	0.10	0.00
20.00	0.09	20	579.00	0.09	0.09	0.00
22.00	0.07	17	579.00	0.07	0.07	0.00
24.00	0.06	14	579.00	0.06	0.06	0.00
26.00	0.00	0	579.00	0.00	0.00	0.00
28.00	0.00	0	579.00	0.00	0.00	0.00
30.00	0.00	0	579.00	0.00	0.00	0.00
32.00	0.00	0	579.00	0.00	0.00	0.00
34.00	0.00	0	579.00	0.00	0.00	0.00
36.00	0.00	0	579.00	0.00	0.00	0.00
38.00	0.00	0	579.00	0.00	0.00	0.00
40.00	0.00	0	579.00	0.00	0.00	0.00
42.00	0.00	0	579.00	0.00	0.00	0.00
44.00	0.00	0	579.00	0.00	0.00	0.00
46.00	0.00	0	579.00	0.00	0.00	0.00
48.00	0.00	0	579.00	0.00	0.00	0.00
50.00	0.00	0	579.00	0.00	0.00	0.00
52.00	0.00	0	579.00	0.00	0.00	0.00
54.00	0.00	0	579.00	0.00	0.00	0.00
56.00	0.00	0	579.00	0.00	0.00	0.00
58.00	0.00	0	579.00	0.00	0.00	0.00
60.00	0.00	0	579.00	0.00	0.00	0.00
62.00	0.00	0	579.00	0.00	0.00	0.00
64.00	0.00	0	579.00	0.00	0.00	0.00
66.00	0.00	0	579.00	0.00	0.00	0.00
68.00	0.00	0	579.00	0.00	0.00	0.00
70.00	0.00	0	579.00	0.00	0.00	0.00
72.00	0.00	0	579.00	0.00	0.00	0.00

Stage-Discharge for Pond 18P: Basin 5

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
579.00	0.00	**0.00**	0.00
579.10	1.37	**1.37**	0.00
579.20	1.37	1.37	0.00
579.30	1.52	1.37	0.15
579.40	2.13	1.37	0.75
579.50	2.99	1.37	1.61
579.60	4.03	1.37	2.66
579.70	5.23	1.37	3.86
579.80	6.56	1.37	5.19
579.90	8.00	1.37	6.63
580.00	9.55	1.37	8.18
580.10	11.19	1.37	9.81
580.20	12.91	1.37	11.54
580.30	14.71	1.37	13.33
580.40	16.57	1.37	15.20
580.50	18.51	1.37	17.14
580.60	20.50	1.37	19.13
580.70	22.55	1.37	21.18
580.80	24.66	1.37	23.28
580.90	26.81	1.37	25.44
581.00	29.00	1.37	27.63
581.10	31.24	1.37	29.87
581.20	33.52	1.37	32.14
581.30	35.83	1.37	34.46
581.40	38.17	1.37	36.80
581.50	40.55	1.37	39.18
581.60	42.96	1.37	41.58
581.70	45.39	1.37	44.02
581.80	47.84	1.37	46.47
581.90	50.32	1.37	48.95
582.00	52.82	1.37	51.45
582.10	55.34	1.37	53.96
582.20	57.87	1.37	56.50
582.30	60.42	1.37	59.05
582.40	62.98	1.37	61.61
582.50	65.55	1.37	64.18
582.60	68.14	1.37	66.77
582.70	70.73	1.37	69.36
582.80	73.33	1.37	71.96
582.90	75.94	1.37	74.56
583.00	78.55	1.37	77.18
583.10	81.16	1.37	79.79
583.20	83.78	1.37	82.40
583.30	86.39	1.37	85.02
583.40	89.01	1.37	87.64
583.50	91.62	1.37	90.25
583.60	94.23	1.37	92.86
583.70	96.84	1.37	95.47
583.80	99.44	1.37	98.07
583.90	102.03	1.37	100.66
584.00	104.62	1.37	103.25
584.10	107.20	1.37	105.83
584.20	109.77	1.37	108.40
584.30	**112.33**	1.37	**110.96**

Stage-Area-Storage for Pond 18P: Basin 5

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
579.00	**14,810**	0
579.10	14,810	592
579.20	14,810	1,185
579.30	14,810	1,777
579.40	14,810	2,370
579.50	14,810	2,962
579.60	14,810	3,554
579.70	14,810	4,147
579.80	14,810	4,739
579.90	14,810	5,332
580.00	14,810	5,924
580.10	14,810	6,516
580.20	14,810	7,109
580.30	14,810	7,701
580.40	14,810	8,294
580.50	14,810	8,886
580.60	14,810	9,478
580.70	14,810	10,071
580.80	14,810	10,663
580.90	14,810	11,256
581.00	14,810	11,848
581.10	14,810	12,440
581.20	14,810	13,033
581.30	14,810	13,625
581.40	14,810	14,218
581.50	14,810	14,810
581.60	14,810	15,402
581.70	14,810	15,995
581.80	14,810	16,587
581.90	14,810	17,180
582.00	14,810	17,772
582.10	14,810	18,364
582.20	14,810	18,957
582.30	14,810	19,549
582.40	14,810	20,142
582.50	14,810	20,734
582.60	14,810	21,326
582.70	14,810	21,919
582.80	14,810	22,511
582.90	14,810	23,104
583.00	14,810	23,696
583.10	14,810	24,288
583.20	14,810	24,881
583.30	14,810	25,473
583.40	14,810	26,066
583.50	14,810	26,658
583.60	14,810	27,250
583.70	14,810	27,843
583.80	14,810	28,435
583.90	14,810	29,028
584.00	14,810	29,620
584.10	14,810	30,212
584.20	14,810	30,805
584.30	14,810	**31,397**

Summary for Pond 24P: Basin 6

Inflow Area = 180,292 sf, 63.14% Impervious, Inflow Depth = 4.08" for 10-Year event
Inflow = 18.97 cfs @ 12.11 hrs, Volume= 61,340 cf
Outflow = 10.90 cfs @ 12.16 hrs, Volume= 61,340 cf, Atten= 43%, Lag= 3.3 min
Discarded = 8.27 cfs @ 11.96 hrs, Volume= 59,486 cf
Primary = 2.63 cfs @ 12.16 hrs, Volume= 1,854 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 600.28' @ 12.16 hrs Surf.Area= 35,719 sf Storage= 4,048 cf

Plug-Flow detention time= 1.3 min calculated for 61,340 cf (100% of inflow)
Center-of-Mass det. time= 1.3 min (769.9 - 768.6)

Volume	Invert	Avail.Storage	Storage Description
#1	600.00'	20,288 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 50,721 cf Overall x 40.0% Voids

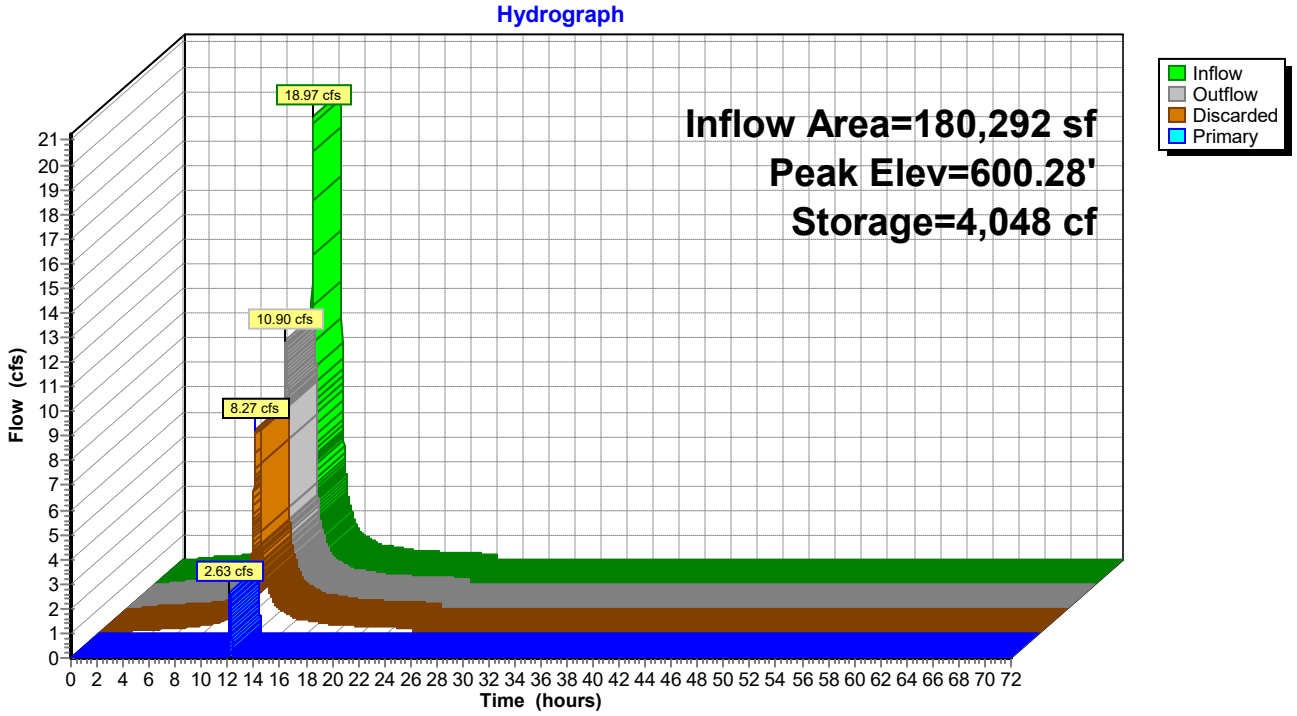
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
600.00	35,719	0	0
601.00	35,719	35,719	35,719
601.42	35,719	15,002	50,721

Device	Routing	Invert	Outlet Devices
#1	Primary	600.02'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	600.00'	**10.000 in/hr Exfiltration over Surface area**

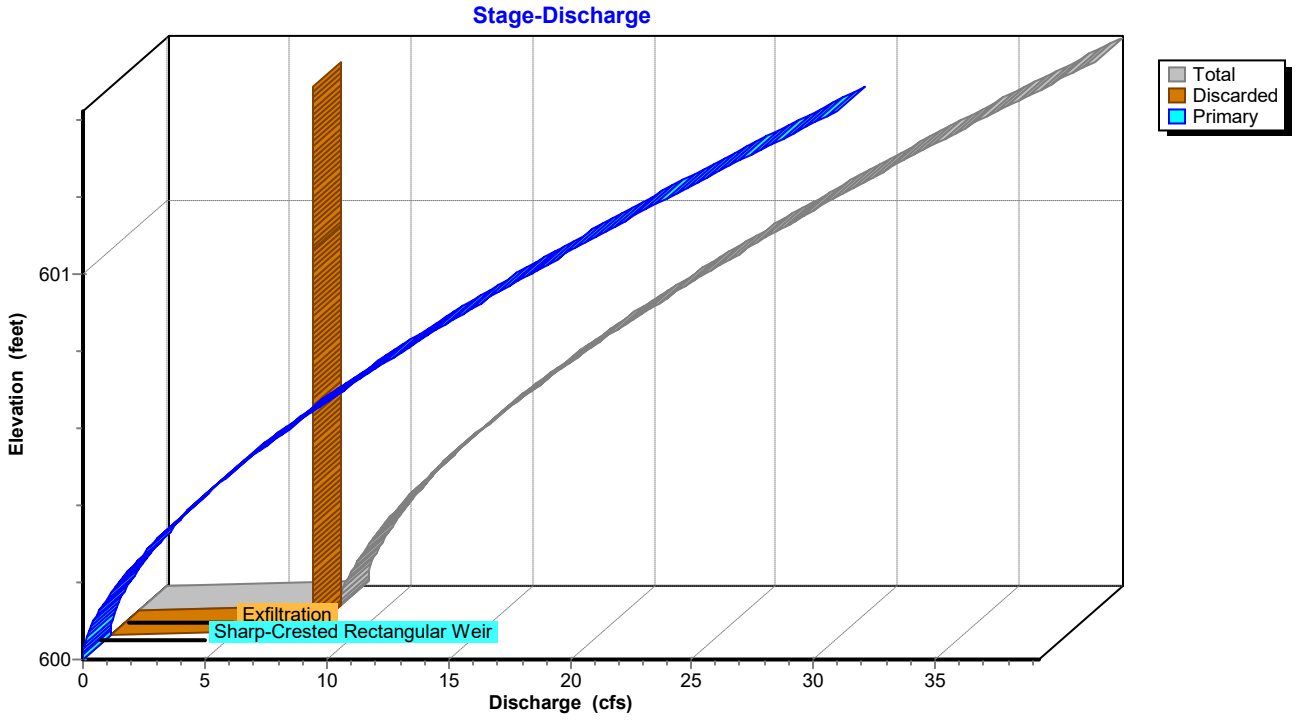
Discarded OutFlow Max=8.27 cfs @ 11.96 hrs HW=600.02' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 8.27 cfs)

Primary OutFlow Max=2.62 cfs @ 12.16 hrs HW=600.28' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 2.62 cfs @ 1.68 fps)

Pond 24P: Basin 6



Pond 24P: Basin 6



Hydrograph for Pond 24P: Basin 6

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	600.00	0.00	0.00	0.00
2.00	0.09	2	600.00	0.09	0.09	0.00
4.00	0.16	4	600.00	0.16	0.16	0.00
6.00	0.21	5	600.00	0.21	0.21	0.00
8.00	0.34	8	600.00	0.34	0.34	0.00
10.00	0.68	17	600.00	0.68	**0.68**	0.00
12.00	**10.90**	**525**	**600.04**	**8.31**	**8.27**	**0.05**
14.00	**0.95**	**23**	**600.00**	**0.96**	0.96	**0.00**
16.00	0.54	13	600.00	0.54	0.54	0.00
18.00	0.36	9	600.00	0.36	0.36	0.00
20.00	0.31	8	600.00	0.31	0.31	0.00
22.00	0.27	7	600.00	0.27	0.27	0.00
24.00	0.22	5	600.00	0.22	0.22	0.00
26.00	0.00	0	600.00	0.00	0.00	0.00
28.00	0.00	0	600.00	0.00	0.00	0.00
30.00	0.00	0	600.00	0.00	0.00	0.00
32.00	0.00	0	600.00	0.00	0.00	0.00
34.00	0.00	0	600.00	0.00	0.00	0.00
36.00	0.00	0	600.00	0.00	0.00	0.00
38.00	0.00	0	600.00	0.00	0.00	0.00
40.00	0.00	0	600.00	0.00	0.00	0.00
42.00	0.00	0	600.00	0.00	0.00	0.00
44.00	0.00	0	600.00	0.00	0.00	0.00
46.00	0.00	0	600.00	0.00	0.00	0.00
48.00	0.00	0	600.00	0.00	0.00	0.00
50.00	0.00	0	600.00	0.00	0.00	0.00
52.00	0.00	0	600.00	0.00	0.00	0.00
54.00	0.00	0	600.00	0.00	0.00	0.00
56.00	0.00	0	600.00	0.00	0.00	0.00
58.00	0.00	0	600.00	0.00	0.00	0.00
60.00	0.00	0	600.00	0.00	0.00	0.00
62.00	0.00	0	600.00	0.00	0.00	0.00
64.00	0.00	0	600.00	0.00	0.00	0.00
66.00	0.00	0	600.00	0.00	0.00	0.00
68.00	0.00	0	600.00	0.00	0.00	0.00
70.00	0.00	0	600.00	0.00	0.00	0.00
72.00	0.00	0	600.00	0.00	0.00	0.00

Stage-Discharge for Pond 24P: Basin 6

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
600.00	0.00	**0.00**	0.00
600.02	8.27	**8.27**	0.00
600.04	8.32	8.27	0.06
600.06	8.43	8.27	0.16
600.08	8.56	8.27	0.29
600.10	8.71	8.27	0.44
600.12	8.89	8.27	0.62
600.14	9.08	8.27	0.81
600.16	9.29	8.27	1.02
600.18	9.52	8.27	1.25
600.20	9.76	8.27	1.49
600.22	10.01	8.27	1.74
600.24	10.28	8.27	2.01
600.26	10.56	8.27	2.29
600.28	10.85	8.27	2.58
600.30	11.15	8.27	2.88
600.32	11.46	8.27	3.19
600.34	11.78	8.27	3.51
600.36	12.11	8.27	3.85
600.38	12.46	8.27	4.19
600.40	12.81	8.27	4.54
600.42	13.17	8.27	4.90
600.44	13.53	8.27	5.27
600.46	13.91	8.27	5.64
600.48	14.30	8.27	6.03
600.50	14.69	8.27	6.42
600.52	15.09	8.27	6.82
600.54	15.50	8.27	7.23
600.56	15.91	8.27	7.65
600.58	16.34	8.27	8.07
600.60	16.77	8.27	8.50
600.62	17.20	8.27	8.94
600.64	17.65	8.27	9.38
600.66	18.10	8.27	9.83
600.68	18.56	8.27	10.29
600.70	19.02	8.27	10.75
600.72	19.49	8.27	11.22
600.74	19.97	8.27	11.70
600.76	20.45	8.27	12.18
600.78	20.94	8.27	12.67
600.80	21.43	8.27	13.16
600.82	21.93	8.27	13.66
600.84	22.44	8.27	14.17
600.86	22.95	8.27	14.68
600.88	23.47	8.27	15.20
600.90	23.99	8.27	15.72
600.92	24.52	8.27	16.25
600.94	25.05	8.27	16.78
600.96	25.59	8.27	17.32
600.98	26.13	8.27	17.86
601.00	26.68	8.27	18.41
601.02	27.23	8.27	18.97
601.04	27.79	8.27	19.52
601.06	28.36	8.27	20.09
601.08	28.92	8.27	20.66
601.10	29.50	8.27	21.23
601.12	30.07	8.27	21.81
601.14	30.66	8.27	22.39
601.16	31.24	8.27	22.97
601.18	31.83	8.27	23.56
601.20	32.43	8.27	24.16
601.22	33.03	8.27	24.76
601.24	33.63	8.27	25.36
601.26	34.24	8.27	25.97
601.28	34.85	8.27	26.58
601.30	35.47	8.27	27.20
601.32	36.09	8.27	27.82
601.34	36.71	8.27	28.45
601.36	37.34	8.27	29.07
601.38	37.98	8.27	29.71
601.40	38.61	8.27	30.34
601.42	**39.25**	8.27	**30.98**

Stage-Area-Storage for Pond 24P: Basin 6

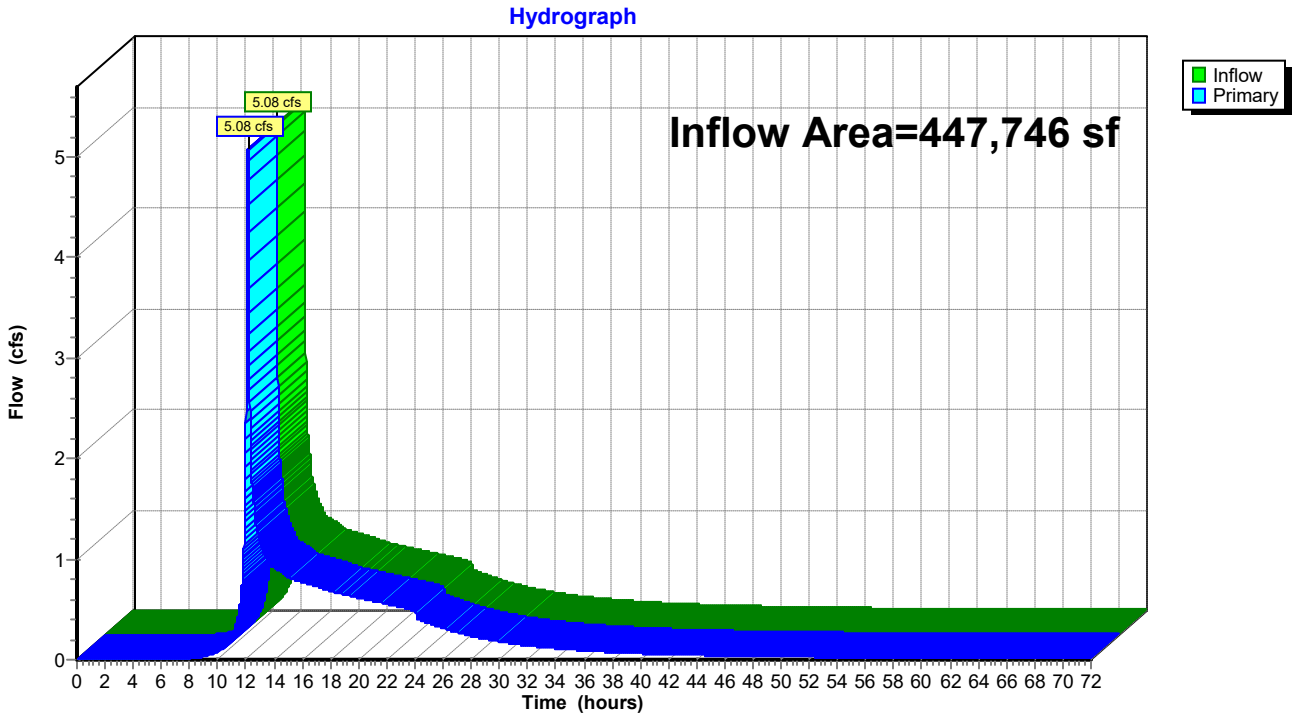
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
600.00	**35,719**	0
600.02	35,719	286
600.04	35,719	572
600.06	35,719	857
600.08	35,719	1,143
600.10	35,719	1,429
600.12	35,719	1,715
600.14	35,719	2,000
600.16	35,719	2,286
600.18	35,719	2,572
600.20	35,719	2,858
600.22	35,719	3,143
600.24	35,719	3,429
600.26	35,719	3,715
600.28	35,719	4,001
600.30	35,719	4,286
600.32	35,719	4,572
600.34	35,719	4,858
600.36	35,719	5,144
600.38	35,719	5,429
600.40	35,719	5,715
600.42	35,719	6,001
600.44	35,719	6,287
600.46	35,719	6,572
600.48	35,719	6,858
600.50	35,719	7,144
600.52	35,719	7,430
600.54	35,719	7,715
600.56	35,719	8,001
600.58	35,719	8,287
600.60	35,719	8,573
600.62	35,719	8,858
600.64	35,719	9,144
600.66	35,719	9,430
600.68	35,719	9,716
600.70	35,719	10,001
600.72	35,719	10,287
600.74	35,719	10,573
600.76	35,719	10,859
600.78	35,719	11,144
600.80	35,719	11,430
600.82	35,719	11,716
600.84	35,719	12,002
600.86	35,719	12,287
600.88	35,719	12,573
600.90	35,719	12,859
600.92	35,719	13,145
600.94	35,719	13,430
600.96	35,719	13,716
600.98	35,719	14,002
601.00	35,719	14,288
601.02	35,719	14,573
601.04	35,719	14,859
601.06	35,719	15,145
601.08	35,719	15,431
601.10	35,719	15,716
601.12	35,719	16,002
601.14	35,719	16,288
601.16	35,719	16,574
601.18	35,719	16,859
601.20	35,719	17,145
601.22	35,719	17,431
601.24	35,719	17,717
601.26	35,719	18,002
601.28	35,719	18,288
601.30	35,719	18,574
601.32	35,719	18,860
601.34	35,719	19,145
601.36	35,719	19,431
601.38	35,719	19,717
601.40	35,719	20,003
601.42	35,719	**20,288**

Summary for Link 25L: POA 1

Inflow Area = 447,746 sf, 43.41% Impervious, Inflow Depth > 1.37" for 10-Year event
Inflow = 5.08 cfs @ 12.14 hrs, Volume= 51,242 cf
Primary = 5.08 cfs @ 12.14 hrs, Volume= 51,242 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 25L: POA 1



Hydrograph for Link 25L: POA 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	51.00	0.03	0.00	0.03
1.00	0.00	0.00	0.00	52.00	0.03	0.00	0.03
2.00	0.00	0.00	0.00	53.00	0.03	0.00	0.03
3.00	0.00	0.00	0.00	54.00	0.02	0.00	0.02
4.00	0.00	0.00	0.00	55.00	0.02	0.00	0.02
5.00	0.00	0.00	0.00	56.00	0.02	0.00	0.02
6.00	0.00	0.00	0.00	57.00	0.02	0.00	0.02
7.00	0.00	0.00	0.00	58.00	0.02	0.00	0.02
8.00	0.01	0.00	0.01	59.00	0.02	0.00	0.02
9.00	0.03	0.00	0.03	60.00	0.02	0.00	0.02
10.00	0.09	0.00	0.09	61.00	0.02	0.00	0.02
11.00	0.23	0.00	0.23	62.00	0.02	0.00	0.02
12.00	**2.34**	0.00	**2.34**	63.00	0.01	0.00	0.01
13.00	**1.18**	0.00	**1.18**	64.00	0.01	0.00	0.01
14.00	0.92	0.00	0.92	65.00	0.01	0.00	0.01
15.00	0.82	0.00	0.82	66.00	0.01	0.00	0.01
16.00	0.77	0.00	0.77	67.00	0.01	0.00	0.01
17.00	0.73	0.00	0.73	68.00	0.01	0.00	0.01
18.00	0.68	0.00	0.68	69.00	0.01	0.00	0.01
19.00	0.65	0.00	0.65	70.00	0.01	0.00	0.01
20.00	0.62	0.00	0.62	71.00	0.01	0.00	0.01
21.00	0.58	0.00	0.58	72.00	0.01	0.00	0.01
22.00	0.56	0.00	0.56				
23.00	0.52	0.00	0.52				
24.00	0.49	0.00	0.49				
25.00	0.36	0.00	0.36				
26.00	0.31	0.00	0.31				
27.00	0.27	0.00	0.27				
28.00	0.24	0.00	0.24				
29.00	0.21	0.00	0.21				
30.00	0.18	0.00	0.18				
31.00	0.16	0.00	0.16				
32.00	0.14	0.00	0.14				
33.00	0.12	0.00	0.12				
34.00	0.11	0.00	0.11				
35.00	0.10	0.00	0.10				
36.00	0.09	0.00	0.09				
37.00	0.08	0.00	0.08				
38.00	0.07	0.00	0.07				
39.00	0.07	0.00	0.07				
40.00	0.06	0.00	0.06				
41.00	0.06	0.00	0.06				
42.00	0.05	0.00	0.05				
43.00	0.05	0.00	0.05				
44.00	0.05	0.00	0.05				
45.00	0.04	0.00	0.04				
46.00	0.04	0.00	0.04				
47.00	0.04	0.00	0.04				
48.00	0.03	0.00	0.03				
49.00	0.03	0.00	0.03				
50.00	0.03	0.00	0.03				

Summary for Subcatchment 14S: Basin 1 - Imp

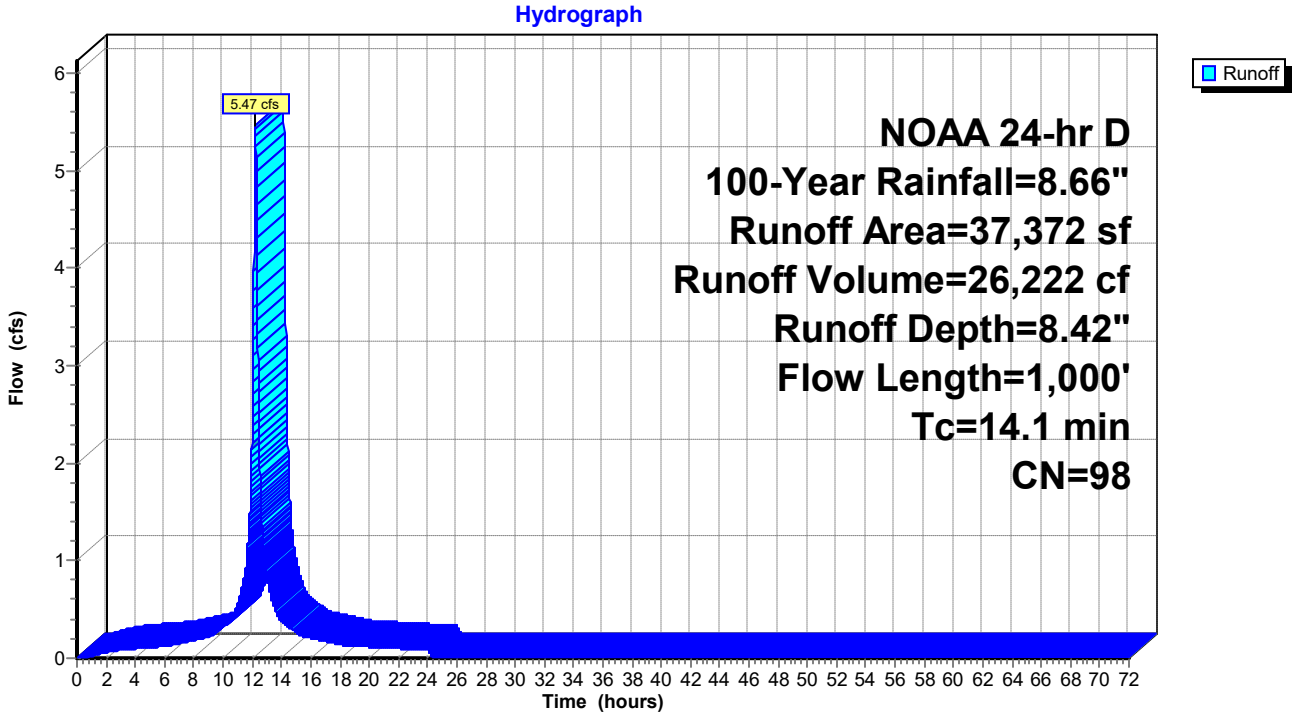
Runoff = 5.47 cfs @ 12.21 hrs, Volume= 26,222 cf, Depth= 8.42"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
8,944	98	Paved parking, HSG D
28,428	98	Paved parking, HSG C
37,372	98	Weighted Average
37,372		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 14S: Basin 1 - Imp



Hydrograph for Subcatchment 14S: Basin 1 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.01	0.02
2.00	0.21	0.08	0.06
3.00	0.33	0.17	0.08
4.00	0.45	0.28	0.10
5.00	0.59	0.40	0.11
6.00	0.74	0.54	0.12
7.00	0.91	0.71	0.15
8.00	1.12	0.91	0.19
9.00	1.37	1.16	0.22
10.00	1.72	1.49	0.33
11.00	2.25	2.02	0.55
12.00	4.15	3.91	**2.39**
13.00	6.41	6.17	**0.84**
14.00	6.94	6.70	0.38
15.00	7.29	7.05	0.26
16.00	7.54	7.30	0.21
17.00	7.75	7.51	0.17
18.00	7.92	7.68	0.14
19.00	8.07	7.83	0.13
20.00	8.21	7.97	0.12
21.00	8.33	8.09	0.11
22.00	8.45	8.21	0.10
23.00	8.56	8.32	0.09
24.00	**8.66**	**8.42**	0.08
25.00	8.66	8.42	0.00
26.00	8.66	8.42	0.00
27.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00
29.00	8.66	8.42	0.00
30.00	8.66	8.42	0.00
31.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00
33.00	8.66	8.42	0.00
34.00	8.66	8.42	0.00
35.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00
37.00	8.66	8.42	0.00
38.00	8.66	8.42	0.00
39.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00
41.00	8.66	8.42	0.00
42.00	8.66	8.42	0.00
43.00	8.66	8.42	0.00
44.00	8.66	8.42	0.00
45.00	8.66	8.42	0.00
46.00	8.66	8.42	0.00
47.00	8.66	8.42	0.00
48.00	8.66	8.42	0.00
49.00	8.66	8.42	0.00
50.00	8.66	8.42	0.00
51.00	8.66	8.42	0.00
52.00	8.66	8.42	0.00
53.00	8.66	8.42	0.00
54.00	8.66	8.42	0.00
55.00	8.66	8.42	0.00
56.00	8.66	8.42	0.00
57.00	8.66	8.42	0.00
58.00	8.66	8.42	0.00
59.00	8.66	8.42	0.00
60.00	8.66	8.42	0.00
61.00	8.66	8.42	0.00
62.00	8.66	8.42	0.00
63.00	8.66	8.42	0.00
64.00	8.66	8.42	0.00
65.00	8.66	8.42	0.00
66.00	8.66	8.42	0.00
67.00	8.66	8.42	0.00
68.00	8.66	8.42	0.00
69.00	8.66	8.42	0.00
70.00	8.66	8.42	0.00
71.00	8.66	8.42	0.00
72.00	8.66	8.42	0.00

Summary for Subcatchment 15S: Basin 1 - Perv

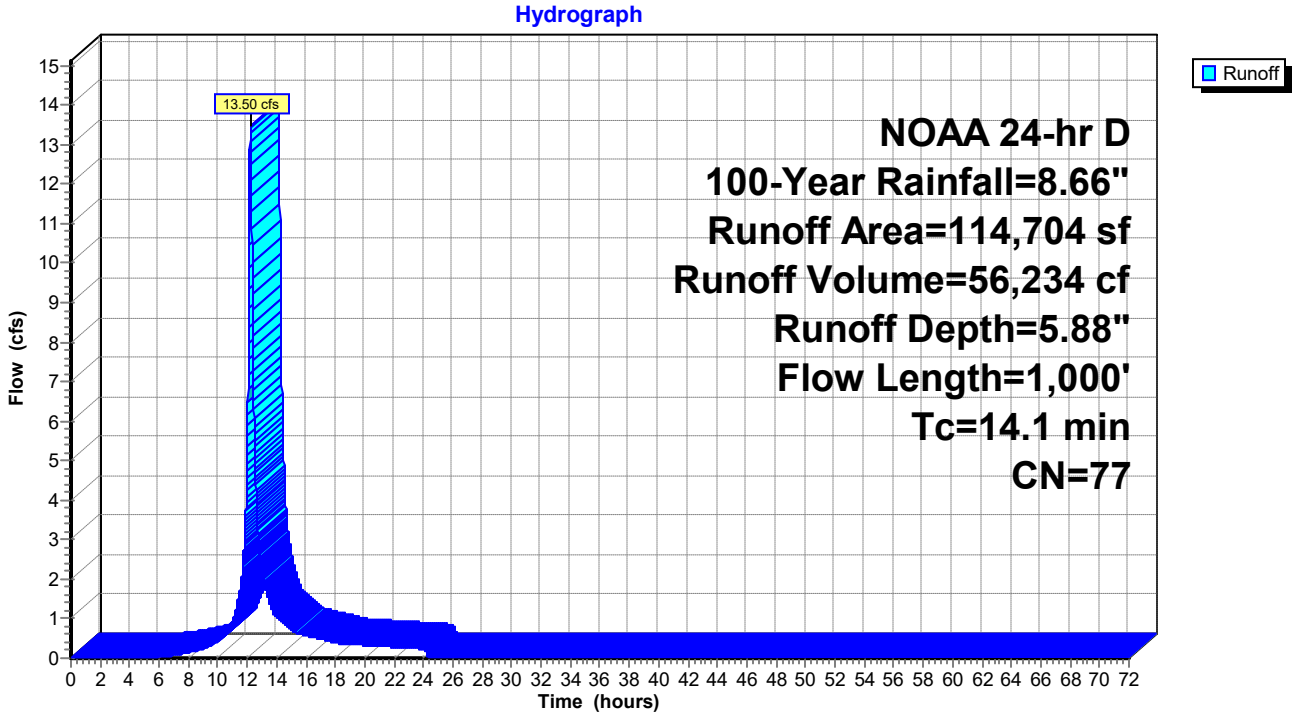
Runoff = 13.50 cfs @ 12.22 hrs, Volume= 56,234 cf, Depth= 5.88"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
65,014	80	>75% Grass cover, Good, HSG D
49,690	74	>75% Grass cover, Good, HSG C
114,704	77	Weighted Average
114,704		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 15S: Basin 1 - Perv



Hydrograph for Subcatchment 15S: Basin 1 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.00	0.00
2.00	0.21	0.00	0.00
3.00	0.33	0.00	0.00
4.00	0.45	0.00	0.00
5.00	0.59	0.00	0.00
6.00	0.74	0.01	0.03
7.00	0.91	0.03	0.08
8.00	1.12	0.08	0.15
9.00	1.37	0.16	0.24
10.00	1.72	0.31	0.45
11.00	2.25	0.59	0.95
12.00	4.15	1.93	**5.36**
13.00	6.41	3.84	**2.26**
14.00	6.94	4.31	1.05
15.00	7.29	4.62	0.73
16.00	7.54	4.85	0.58
17.00	7.75	5.04	0.49
18.00	7.92	5.20	0.39
19.00	8.07	5.34	0.35
20.00	8.21	5.46	0.33
21.00	8.33	5.58	0.31
22.00	8.45	5.69	0.28
23.00	8.56	5.79	0.26
24.00	**8.66**	**5.88**	0.24
25.00	8.66	5.88	0.00
26.00	8.66	5.88	0.00
27.00	8.66	5.88	0.00
28.00	8.66	5.88	0.00
29.00	8.66	5.88	0.00
30.00	8.66	5.88	0.00
31.00	8.66	5.88	0.00
32.00	8.66	5.88	0.00
33.00	8.66	5.88	0.00
34.00	8.66	5.88	0.00
35.00	8.66	5.88	0.00
36.00	8.66	5.88	0.00
37.00	8.66	5.88	0.00
38.00	8.66	5.88	0.00
39.00	8.66	5.88	0.00
40.00	8.66	5.88	0.00
41.00	8.66	5.88	0.00
42.00	8.66	5.88	0.00
43.00	8.66	5.88	0.00
44.00	8.66	5.88	0.00
45.00	8.66	5.88	0.00
46.00	8.66	5.88	0.00
47.00	8.66	5.88	0.00
48.00	8.66	5.88	0.00
49.00	8.66	5.88	0.00
50.00	8.66	5.88	0.00
51.00	8.66	5.88	0.00
52.00	8.66	5.88	0.00
53.00	8.66	5.88	0.00
54.00	8.66	5.88	0.00
55.00	8.66	5.88	0.00
56.00	8.66	5.88	0.00
57.00	8.66	5.88	0.00
58.00	8.66	5.88	0.00
59.00	8.66	5.88	0.00
60.00	8.66	5.88	0.00
61.00	8.66	5.88	0.00
62.00	8.66	5.88	0.00
63.00	8.66	5.88	0.00
64.00	8.66	5.88	0.00
65.00	8.66	5.88	0.00
66.00	8.66	5.88	0.00
67.00	8.66	5.88	0.00
68.00	8.66	5.88	0.00
69.00	8.66	5.88	0.00
70.00	8.66	5.88	0.00
71.00	8.66	5.88	0.00
72.00	8.66	5.88	0.00

Summary for Subcatchment 17S: Basin 5 - Imp

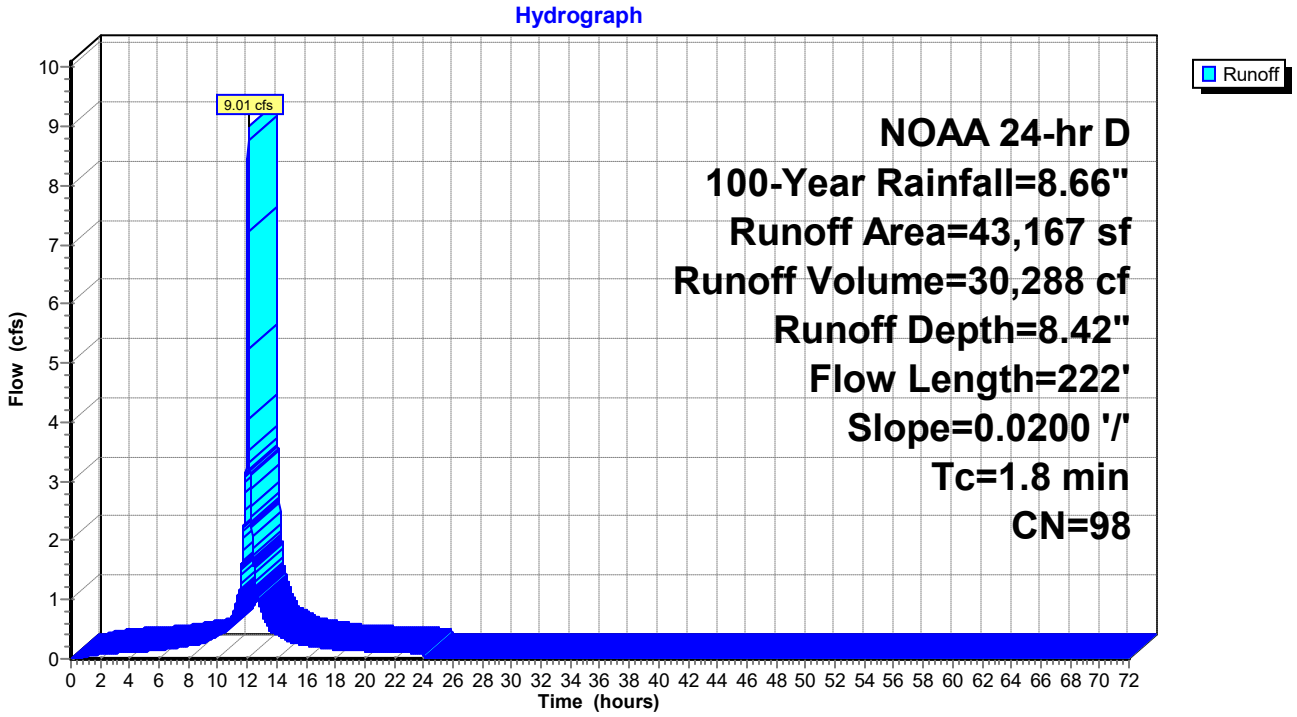
Runoff = 9.01 cfs @ 12.10 hrs, Volume= 30,288 cf, Depth= 8.42"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
26,332	98	Roofs, HSG C
16,835	98	Paved parking, HSG C
43,167	98	Weighted Average
43,167		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 17S: Basin 5 - Imp



Hydrograph for Subcatchment 17S: Basin 5 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.01	0.04
2.00	0.21	0.08	0.08
3.00	0.33	0.17	0.10
4.00	0.45	0.28	0.12
5.00	0.59	0.40	0.13
6.00	0.74	0.54	0.14
7.00	0.91	0.71	0.18
8.00	1.12	0.91	0.22
9.00	1.37	1.16	0.26
10.00	1.72	1.49	0.40
11.00	2.25	2.02	0.72
12.00	4.15	3.91	**5.40**
13.00	6.41	6.17	**0.81**
14.00	6.94	6.70	0.42
15.00	7.29	7.05	0.28
16.00	7.54	7.30	0.23
17.00	7.75	7.51	0.19
18.00	7.92	7.68	0.16
19.00	8.07	7.83	0.14
20.00	8.21	7.97	0.13
21.00	8.33	8.09	0.12
22.00	8.45	8.21	0.11
23.00	8.56	8.32	0.10
24.00	**8.66**	**8.42**	0.10
25.00	8.66	8.42	0.00
26.00	8.66	8.42	0.00
27.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00
29.00	8.66	8.42	0.00
30.00	8.66	8.42	0.00
31.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00
33.00	8.66	8.42	0.00
34.00	8.66	8.42	0.00
35.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00
37.00	8.66	8.42	0.00
38.00	8.66	8.42	0.00
39.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00
41.00	8.66	8.42	0.00
42.00	8.66	8.42	0.00
43.00	8.66	8.42	0.00
44.00	8.66	8.42	0.00
45.00	8.66	8.42	0.00
46.00	8.66	8.42	0.00
47.00	8.66	8.42	0.00
48.00	8.66	8.42	0.00
49.00	8.66	8.42	0.00
50.00	8.66	8.42	0.00
51.00	8.66	8.42	0.00
52.00	8.66	8.42	0.00
53.00	8.66	8.42	0.00
54.00	8.66	8.42	0.00
55.00	8.66	8.42	0.00
56.00	8.66	8.42	0.00
57.00	8.66	8.42	0.00
58.00	8.66	8.42	0.00
59.00	8.66	8.42	0.00
60.00	8.66	8.42	0.00
61.00	8.66	8.42	0.00
62.00	8.66	8.42	0.00
63.00	8.66	8.42	0.00
64.00	8.66	8.42	0.00
65.00	8.66	8.42	0.00
66.00	8.66	8.42	0.00
67.00	8.66	8.42	0.00
68.00	8.66	8.42	0.00
69.00	8.66	8.42	0.00
70.00	8.66	8.42	0.00
71.00	8.66	8.42	0.00
72.00	8.66	8.42	0.00

Summary for Subcatchment 22S: Basin 6 - Imp

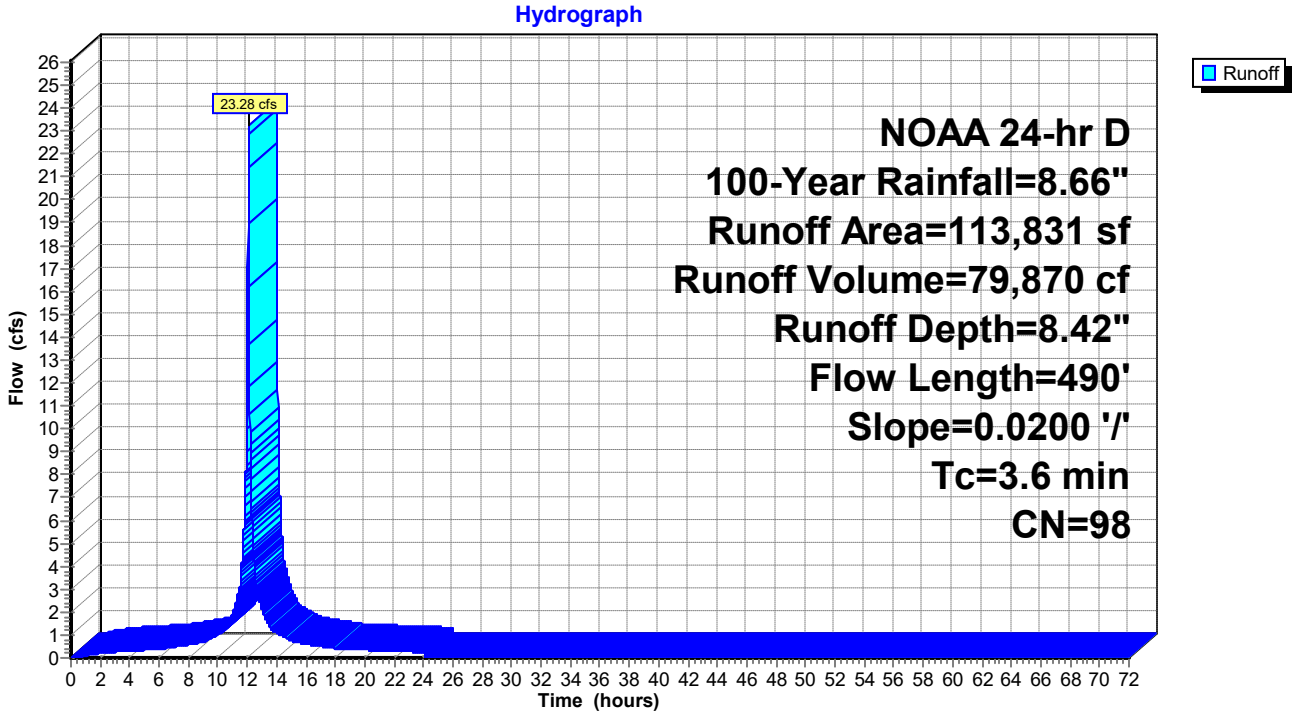
Runoff = 23.28 cfs @ 12.11 hrs, Volume= 79,870 cf, Depth= 8.42"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
10,890	98	Roofs, HSG D
26,136	98	Paved parking, HSG D
41,818	98	Roofs, HSG C
34,987	98	Paved parking, HSG C
113,831	98	Weighted Average
113,831		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 22S: Basin 6 - Imp



Hydrograph for Subcatchment 22S: Basin 6 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.01	0.10
2.00	0.21	0.08	0.20
3.00	0.33	0.17	0.26
4.00	0.45	0.28	0.31
5.00	0.59	0.40	0.35
6.00	0.74	0.54	0.38
7.00	0.91	0.71	0.48
8.00	1.12	0.91	0.59
9.00	1.37	1.16	0.69
10.00	1.72	1.49	1.05
11.00	2.25	2.02	1.88
12.00	4.15	3.91	**13.83**
13.00	6.41	6.17	**2.15**
14.00	6.94	6.70	1.10
15.00	7.29	7.05	0.74
16.00	7.54	7.30	0.61
17.00	7.75	7.51	0.51
18.00	7.92	7.68	0.41
19.00	8.07	7.83	0.38
20.00	8.21	7.97	0.35
21.00	8.33	8.09	0.33
22.00	8.45	8.21	0.30
23.00	8.56	8.32	0.27
24.00	**8.66**	**8.42**	0.25
25.00	8.66	8.42	0.00
26.00	8.66	8.42	0.00
27.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00
29.00	8.66	8.42	0.00
30.00	8.66	8.42	0.00
31.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00
33.00	8.66	8.42	0.00
34.00	8.66	8.42	0.00
35.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00
37.00	8.66	8.42	0.00
38.00	8.66	8.42	0.00
39.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00
41.00	8.66	8.42	0.00
42.00	8.66	8.42	0.00
43.00	8.66	8.42	0.00
44.00	8.66	8.42	0.00
45.00	8.66	8.42	0.00
46.00	8.66	8.42	0.00
47.00	8.66	8.42	0.00
48.00	8.66	8.42	0.00
49.00	8.66	8.42	0.00
50.00	8.66	8.42	0.00
51.00	8.66	8.42	0.00
52.00	8.66	8.42	0.00
53.00	8.66	8.42	0.00
54.00	8.66	8.42	0.00
55.00	8.66	8.42	0.00
56.00	8.66	8.42	0.00
57.00	8.66	8.42	0.00
58.00	8.66	8.42	0.00
59.00	8.66	8.42	0.00
60.00	8.66	8.42	0.00
61.00	8.66	8.42	0.00
62.00	8.66	8.42	0.00
63.00	8.66	8.42	0.00
64.00	8.66	8.42	0.00
65.00	8.66	8.42	0.00
66.00	8.66	8.42	0.00
67.00	8.66	8.42	0.00
68.00	8.66	8.42	0.00
69.00	8.66	8.42	0.00
70.00	8.66	8.42	0.00
71.00	8.66	8.42	0.00
72.00	8.66	8.42	0.00

Summary for Subcatchment 23S: Basin 6 - Perv

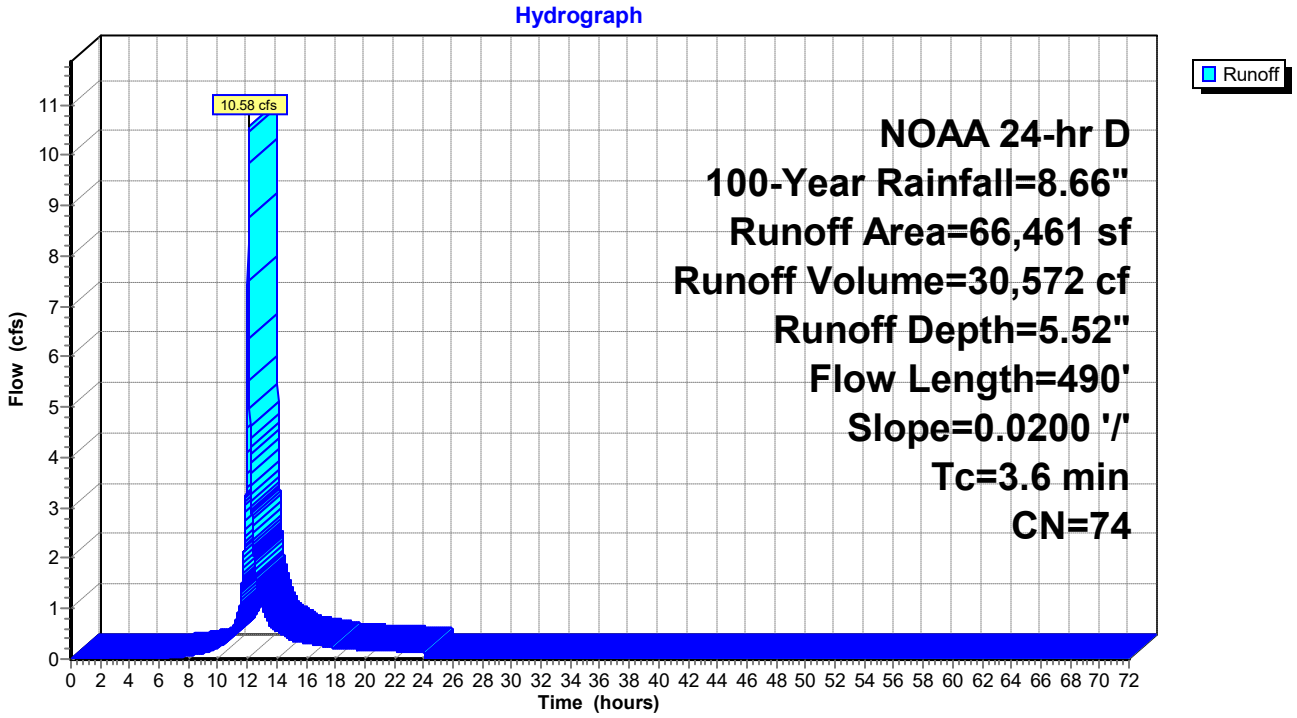
Runoff = 10.58 cfs @ 12.11 hrs, Volume= 30,572 cf, Depth= 5.52"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
66,461	74	>75% Grass cover, Good, HSG C
66,461		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 23S: Basin 6 - Perv



Hydrograph for Subcatchment 23S: Basin 6 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.00	0.00
2.00	0.21	0.00	0.00
3.00	0.33	0.00	0.00
4.00	0.45	0.00	0.00
5.00	0.59	0.00	0.00
6.00	0.74	0.00	0.00
7.00	0.91	0.01	0.03
8.00	1.12	0.05	0.07
9.00	1.37	0.11	0.12
10.00	1.72	0.23	0.24
11.00	2.25	0.47	0.57
12.00	4.15	1.71	**5.85**
13.00	6.41	3.53	**1.07**
14.00	6.94	3.99	0.56
15.00	7.29	4.29	0.38
16.00	7.54	4.51	0.32
17.00	7.75	4.70	0.27
18.00	7.92	4.85	0.21
19.00	8.07	4.99	0.20
20.00	8.21	5.11	0.18
21.00	8.33	5.23	0.17
22.00	8.45	5.33	0.16
23.00	8.56	5.43	0.14
24.00	**8.66**	**5.52**	0.13
25.00	8.66	5.52	0.00
26.00	8.66	5.52	0.00
27.00	8.66	5.52	0.00
28.00	8.66	5.52	0.00
29.00	8.66	5.52	0.00
30.00	8.66	5.52	0.00
31.00	8.66	5.52	0.00
32.00	8.66	5.52	0.00
33.00	8.66	5.52	0.00
34.00	8.66	5.52	0.00
35.00	8.66	5.52	0.00
36.00	8.66	5.52	0.00
37.00	8.66	5.52	0.00
38.00	8.66	5.52	0.00
39.00	8.66	5.52	0.00
40.00	8.66	5.52	0.00
41.00	8.66	5.52	0.00
42.00	8.66	5.52	0.00
43.00	8.66	5.52	0.00
44.00	8.66	5.52	0.00
45.00	8.66	5.52	0.00
46.00	8.66	5.52	0.00
47.00	8.66	5.52	0.00
48.00	8.66	5.52	0.00
49.00	8.66	5.52	0.00
50.00	8.66	5.52	0.00
51.00	8.66	5.52	0.00
52.00	8.66	5.52	0.00
53.00	8.66	5.52	0.00
54.00	8.66	5.52	0.00
55.00	8.66	5.52	0.00
56.00	8.66	5.52	0.00
57.00	8.66	5.52	0.00
58.00	8.66	5.52	0.00
59.00	8.66	5.52	0.00
60.00	8.66	5.52	0.00
61.00	8.66	5.52	0.00
62.00	8.66	5.52	0.00
63.00	8.66	5.52	0.00
64.00	8.66	5.52	0.00
65.00	8.66	5.52	0.00
66.00	8.66	5.52	0.00
67.00	8.66	5.52	0.00
68.00	8.66	5.52	0.00
69.00	8.66	5.52	0.00
70.00	8.66	5.52	0.00
71.00	8.66	5.52	0.00
72.00	8.66	5.52	0.00

Summary for Subcatchment 26S: DA 1 Und - Perv

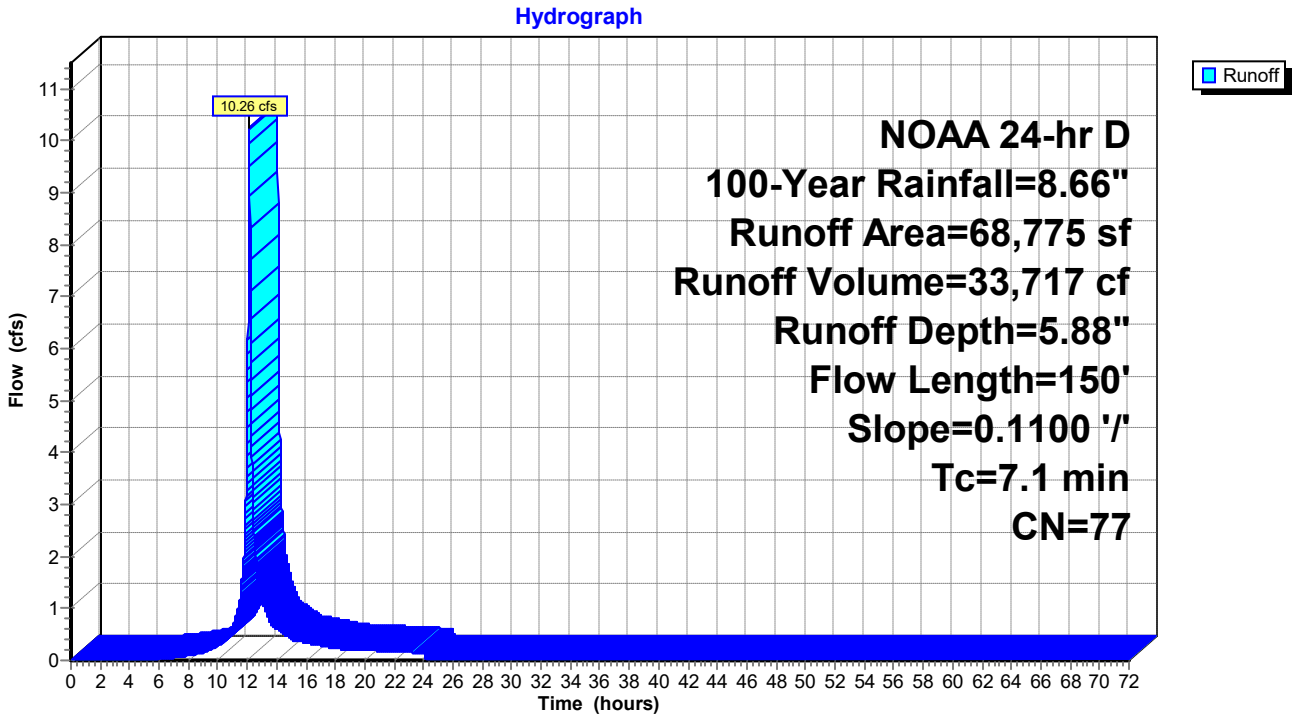
Runoff = 10.26 cfs @ 12.14 hrs, Volume= 33,717 cf, Depth= 5.88"
Routed to Link 25L : POA 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
34,475	80	>75% Grass cover, Good, HSG D
34,300	74	>75% Grass cover, Good, HSG C
68,775	77	Weighted Average
68,775		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	50	0.1100	5.34		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.1	150	Total			

Subcatchment 26S: DA 1 Und - Perv



Hydrograph for Subcatchment 26S: DA 1 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.00	0.00
2.00	0.21	0.00	0.00
3.00	0.33	0.00	0.00
4.00	0.45	0.00	0.00
5.00	0.59	0.00	0.00
6.00	0.74	0.01	0.02
7.00	0.91	0.03	0.05
8.00	1.12	0.08	0.10
9.00	1.37	0.16	0.15
10.00	1.72	0.31	0.29
11.00	2.25	0.59	0.63
12.00	4.15	1.93	**5.07**
13.00	6.41	3.84	**1.21**
14.00	6.94	4.31	0.61
15.00	7.29	4.62	0.42
16.00	7.54	4.85	0.34
17.00	7.75	5.04	0.29
18.00	7.92	5.20	0.23
19.00	8.07	5.34	0.21
20.00	8.21	5.46	0.20
21.00	8.33	5.58	0.18
22.00	8.45	5.69	0.17
23.00	8.56	5.79	0.15
24.00	**8.66**	**5.88**	0.14
25.00	8.66	5.88	0.00
26.00	8.66	5.88	0.00
27.00	8.66	5.88	0.00
28.00	8.66	5.88	0.00
29.00	8.66	5.88	0.00
30.00	8.66	5.88	0.00
31.00	8.66	5.88	0.00
32.00	8.66	5.88	0.00
33.00	8.66	5.88	0.00
34.00	8.66	5.88	0.00
35.00	8.66	5.88	0.00
36.00	8.66	5.88	0.00
37.00	8.66	5.88	0.00
38.00	8.66	5.88	0.00
39.00	8.66	5.88	0.00
40.00	8.66	5.88	0.00
41.00	8.66	5.88	0.00
42.00	8.66	5.88	0.00
43.00	8.66	5.88	0.00
44.00	8.66	5.88	0.00
45.00	8.66	5.88	0.00
46.00	8.66	5.88	0.00
47.00	8.66	5.88	0.00
48.00	8.66	5.88	0.00
49.00	8.66	5.88	0.00
50.00	8.66	5.88	0.00
51.00	8.66	5.88	0.00
52.00	8.66	5.88	0.00
53.00	8.66	5.88	0.00
54.00	8.66	5.88	0.00
55.00	8.66	5.88	0.00
56.00	8.66	5.88	0.00
57.00	8.66	5.88	0.00
58.00	8.66	5.88	0.00
59.00	8.66	5.88	0.00
60.00	8.66	5.88	0.00
61.00	8.66	5.88	0.00
62.00	8.66	5.88	0.00
63.00	8.66	5.88	0.00
64.00	8.66	5.88	0.00
65.00	8.66	5.88	0.00
66.00	8.66	5.88	0.00
67.00	8.66	5.88	0.00
68.00	8.66	5.88	0.00
69.00	8.66	5.88	0.00
70.00	8.66	5.88	0.00
71.00	8.66	5.88	0.00
72.00	8.66	5.88	0.00

Summary for Subcatchment 27S: Basin 5 - Perv

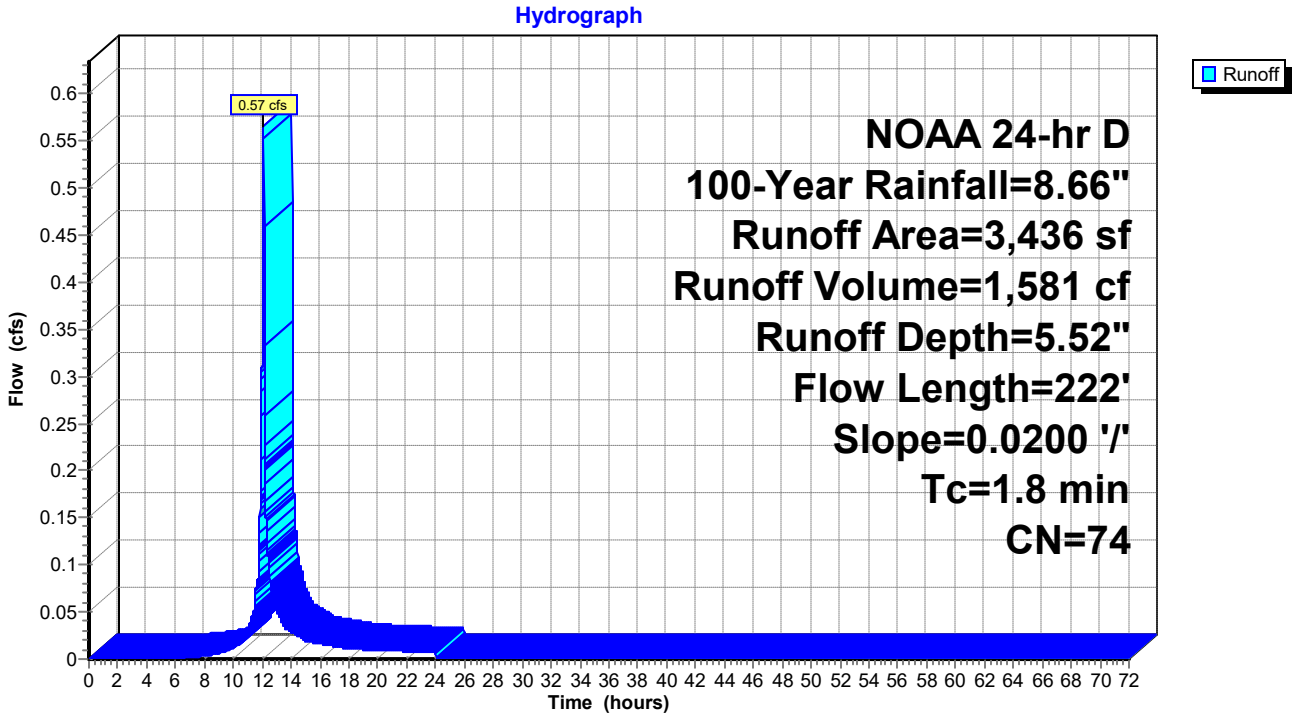
Runoff = 0.57 cfs @ 12.10 hrs, Volume= 1,581 cf, Depth= 5.52"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
3,436	74	>75% Grass cover, Good, HSG C
3,436		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 27S: Basin 5 - Perv



Hydrograph for Subcatchment 27S: Basin 5 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.00	0.00
2.00	0.21	0.00	0.00
3.00	0.33	0.00	0.00
4.00	0.45	0.00	0.00
5.00	0.59	0.00	0.00
6.00	0.74	0.00	0.00
7.00	0.91	0.01	0.00
8.00	1.12	0.05	0.00
9.00	1.37	0.11	0.01
10.00	1.72	0.23	0.01
11.00	2.25	0.47	0.03
12.00	4.15	1.71	**0.32**
13.00	6.41	3.53	**0.06**
14.00	6.94	3.99	0.03
15.00	7.29	4.29	0.02
16.00	7.54	4.51	0.02
17.00	7.75	4.70	0.01
18.00	7.92	4.85	0.01
19.00	8.07	4.99	0.01
20.00	8.21	5.11	0.01
21.00	8.33	5.23	0.01
22.00	8.45	5.33	0.01
23.00	8.56	5.43	0.01
24.00	**8.66**	**5.52**	0.01
25.00	8.66	5.52	0.00
26.00	8.66	5.52	0.00
27.00	8.66	5.52	0.00
28.00	8.66	5.52	0.00
29.00	8.66	5.52	0.00
30.00	8.66	5.52	0.00
31.00	8.66	5.52	0.00
32.00	8.66	5.52	0.00
33.00	8.66	5.52	0.00
34.00	8.66	5.52	0.00
35.00	8.66	5.52	0.00
36.00	8.66	5.52	0.00
37.00	8.66	5.52	0.00
38.00	8.66	5.52	0.00
39.00	8.66	5.52	0.00
40.00	8.66	5.52	0.00
41.00	8.66	5.52	0.00
42.00	8.66	5.52	0.00
43.00	8.66	5.52	0.00
44.00	8.66	5.52	0.00
45.00	8.66	5.52	0.00
46.00	8.66	5.52	0.00
47.00	8.66	5.52	0.00
48.00	8.66	5.52	0.00
49.00	8.66	5.52	0.00
50.00	8.66	5.52	0.00
51.00	8.66	5.52	0.00
52.00	8.66	5.52	0.00
53.00	8.66	5.52	0.00
54.00	8.66	5.52	0.00
55.00	8.66	5.52	0.00
56.00	8.66	5.52	0.00
57.00	8.66	5.52	0.00
58.00	8.66	5.52	0.00
59.00	8.66	5.52	0.00
60.00	8.66	5.52	0.00
61.00	8.66	5.52	0.00
62.00	8.66	5.52	0.00
63.00	8.66	5.52	0.00
64.00	8.66	5.52	0.00
65.00	8.66	5.52	0.00
66.00	8.66	5.52	0.00
67.00	8.66	5.52	0.00
68.00	8.66	5.52	0.00
69.00	8.66	5.52	0.00
70.00	8.66	5.52	0.00
71.00	8.66	5.52	0.00
72.00	8.66	5.52	0.00

Summary for Pond 16P: Basin 1

Inflow Area = 378,971 sf, 51.29% Impervious, Inflow Depth = 3.19" for 100-Year event
Inflow = 33.46 cfs @ 12.18 hrs, Volume= 100,659 cf
Outflow = 1.18 cfs @ 14.57 hrs, Volume= 89,978 cf, Atten= 96%, Lag= 143.3 min
Primary = 1.18 cfs @ 14.57 hrs, Volume= 89,978 cf
Routed to Link 25L : POA 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 545.56' @ 14.57 hrs Surf.Area= 36,933 sf Storage= 71,431 cf

Plug-Flow detention time= 788.4 min calculated for 89,978 cf (89% of inflow)
Center-of-Mass det. time= 736.4 min (1,523.2 - 786.8)

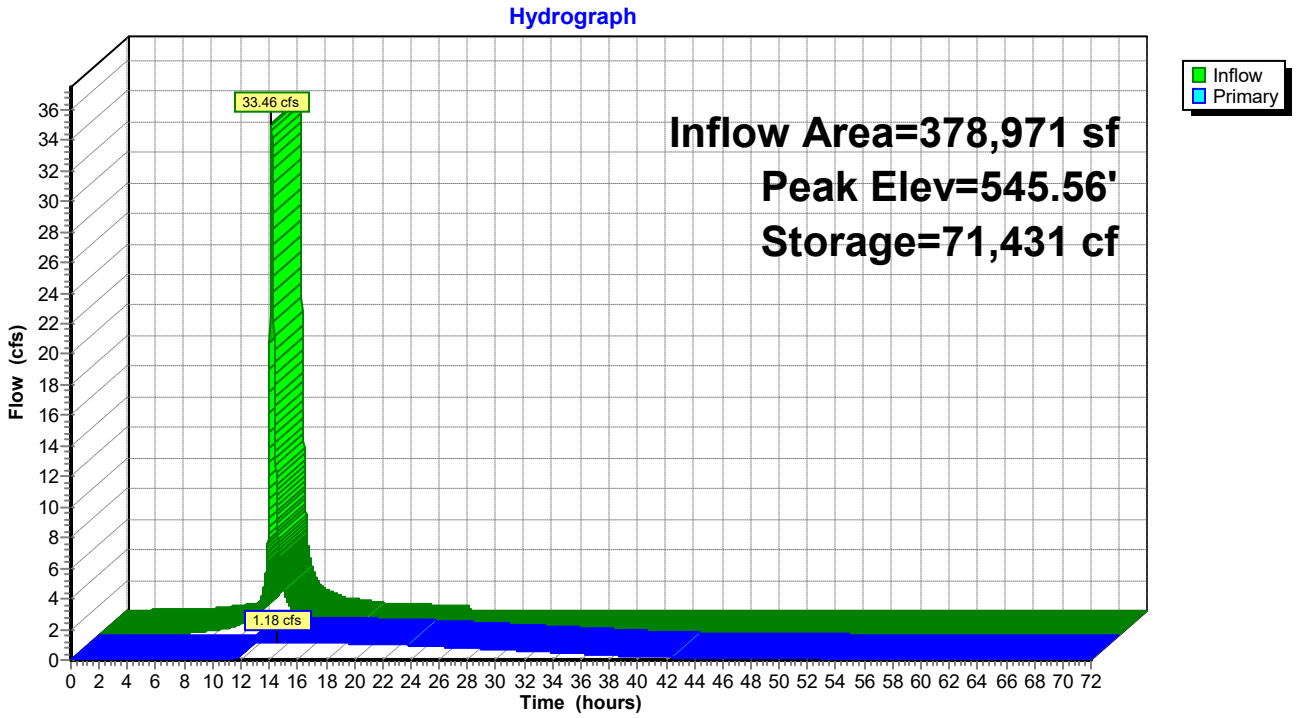
Volume	Invert	Avail.Storage	Storage Description
#1	543.50'	126,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
543.50	32,670	0	0
544.00	33,541	16,553	16,553
545.00	35,719	34,630	51,183
546.00	37,897	36,808	87,991
547.00	39,640	38,769	126,759

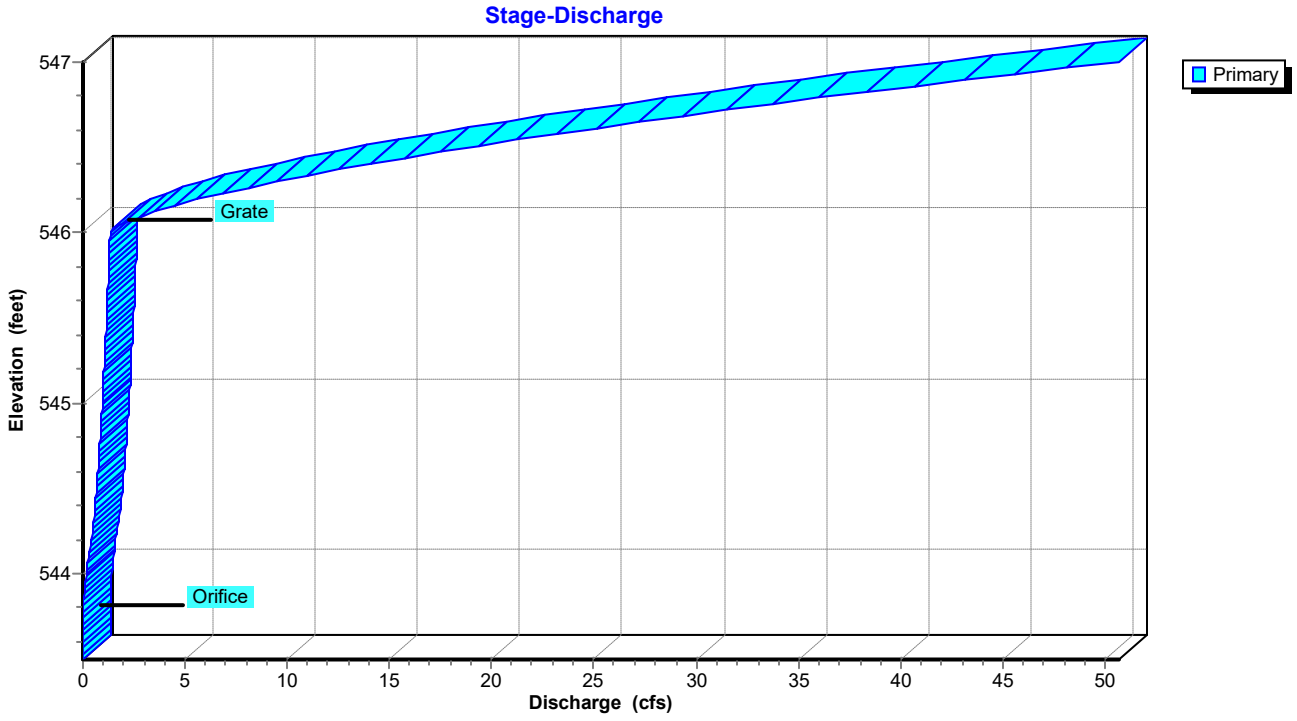
Device	Routing	Invert	Outlet Devices
#1	Primary	546.00'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	543.75'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.18 cfs @ 14.57 hrs HW=545.56' (Free Discharge)
1=Grate (Controls 0.00 cfs)
2=Orifice (Orifice Controls 1.18 cfs @ 6.01 fps)

Pond 16P: Basin 1



Pond 16P: Basin 1



Hydrograph for Pond 16P: Basin 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	543.50	0.00
2.00	0.06	183	543.51	0.00
4.00	0.10	783	543.52	0.00
6.00	0.15	1,624	543.55	0.00
8.00	0.34	3,318	543.60	0.00
10.00	0.78	6,933	543.71	0.00
12.00	**10.45**	21,716	544.15	0.37
14.00	**1.43**	**71,169**	**545.55**	**1.18**
16.00	0.78	**70,157**	**545.52**	**1.17**
18.00	0.53	66,628	545.43	1.13
20.00	0.45	62,126	545.30	1.08
22.00	0.38	57,534	545.18	1.03
24.00	0.32	52,891	545.05	0.97
26.00	0.00	46,476	544.87	0.88
28.00	0.00	40,464	544.70	0.79
30.00	0.00	35,112	544.54	0.70
32.00	0.00	30,428	544.41	0.60
34.00	0.00	26,417	544.29	0.51
36.00	0.00	23,072	544.19	0.42
38.00	0.00	20,442	544.12	0.32
40.00	0.00	18,459	544.06	0.24
42.00	0.00	16,958	544.01	0.18
44.00	0.00	15,802	543.98	0.14
46.00	0.00	14,893	543.95	0.11
48.00	0.00	14,163	543.93	0.09
50.00	0.00	13,570	543.91	0.08
52.00	0.00	13,075	543.90	0.06
54.00	0.00	12,662	543.88	0.05
56.00	0.00	12,309	543.87	0.05
58.00	0.00	12,004	543.86	0.04
60.00	0.00	11,740	543.86	0.03
62.00	0.00	11,511	543.85	0.03
64.00	0.00	11,309	543.84	0.03
66.00	0.00	11,126	543.84	0.02
68.00	0.00	10,962	543.83	0.02
70.00	0.00	10,815	543.83	0.02
72.00	0.00	10,682	543.82	0.02

Stage-Discharge for Pond 16P: Basin 1

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
543.50	0.00	544.52	0.68	545.54	1.17	546.56	22.07
543.52	0.00	544.54	0.69	545.56	1.18	546.58	23.18
543.54	0.00	544.56	0.71	545.58	1.19	546.60	24.32
543.56	0.00	544.58	0.72	545.60	1.20	546.62	25.48
543.58	0.00	544.60	0.73	545.62	1.20	546.64	26.65
543.60	0.00	544.62	0.74	545.64	1.21	546.66	27.84
543.62	0.00	544.64	0.76	545.66	1.22	546.68	29.05
543.64	0.00	544.66	0.77	545.68	1.23	546.70	30.28
543.66	0.00	544.68	0.78	545.70	1.23	546.72	31.53
543.68	0.00	544.70	0.79	545.72	1.24	546.74	32.79
543.70	0.00	544.72	0.80	545.74	1.25	546.76	34.07
543.72	0.00	544.74	0.81	545.76	1.25	546.78	35.37
543.74	0.00	544.76	0.82	545.78	1.26	546.80	36.68
543.76	0.00	544.78	0.83	545.80	1.27	546.82	38.01
543.78	0.00	544.80	0.85	545.82	1.28	546.84	39.36
543.80	0.01	544.82	0.86	545.84	1.28	546.86	40.72
543.82	0.02	544.84	0.87	545.86	1.29	546.88	42.10
543.84	0.02	544.86	0.88	545.88	1.30	546.90	43.49
543.86	0.04	544.88	0.89	545.90	1.30	546.92	44.90
543.88	0.05	544.90	0.90	545.92	1.31	546.94	46.32
543.90	0.07	544.92	0.91	545.94	1.32	546.96	47.76
543.92	0.08	544.94	0.92	545.96	1.32	546.98	49.22
543.94	0.10	544.96	0.93	545.98	1.33	547.00	**50.69**
543.96	0.12	544.98	0.94	546.00	1.34		
543.98	0.14	545.00	0.95	546.02	1.48		
544.00	0.17	545.02	0.95	546.04	1.74		
544.02	0.19	545.04	0.96	546.06	2.08		
544.04	0.22	545.06	0.97	546.08	2.47		
544.06	0.24	545.08	0.98	546.10	2.92		
544.08	0.27	545.10	0.99	546.12	3.42		
544.10	0.30	545.12	1.00	546.14	3.95		
544.12	0.32	545.14	1.01	546.16	4.53		
544.14	0.35	545.16	1.02	546.18	5.14		
544.16	0.38	545.18	1.03	546.20	5.79		
544.18	0.40	545.20	1.04	546.22	6.47		
544.20	0.43	545.22	1.04	546.24	7.18		
544.22	0.45	545.24	1.05	546.26	7.92		
544.24	0.47	545.26	1.06	546.28	8.69		
544.26	0.48	545.28	1.07	546.30	9.49		
544.28	0.50	545.30	1.08	546.32	10.32		
544.30	0.52	545.32	1.09	546.34	11.17		
544.32	0.53	545.34	1.09	546.36	12.05		
544.34	0.55	545.36	1.10	546.38	12.95		
544.36	0.57	545.38	1.11	546.40	13.87		
544.38	0.58	545.40	1.12	546.42	14.82		
544.40	0.60	545.42	1.13	546.44	15.79		
544.42	0.61	545.44	1.13	546.46	16.79		
544.44	0.63	545.46	1.14	546.48	17.80		
544.46	0.64	545.48	1.15	546.50	18.84		
544.48	0.66	545.50	1.16	546.52	19.89		
544.50	0.67	545.52	1.17	546.54	20.97		

Stage-Area-Storage for Pond 16P: Basin 1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
543.50	32,670	0
543.55	32,757	1,636
543.60	32,844	3,276
543.65	32,931	4,920
543.70	33,018	6,569
543.75	33,106	8,222
543.80	33,193	9,879
543.85	33,280	11,541
543.90	33,367	13,207
543.95	33,454	14,878
544.00	33,541	16,553
544.05	33,650	18,233
544.10	33,759	19,918
544.15	33,868	21,608
544.20	33,977	23,305
544.25	34,086	25,006
544.30	34,194	26,713
544.35	34,303	28,426
544.40	34,412	30,143
544.45	34,521	31,867
544.50	34,630	33,596
544.55	34,739	35,330
544.60	34,848	37,069
544.65	34,957	38,815
544.70	35,066	40,565
544.75	35,175	42,321
544.80	35,283	44,083
544.85	35,392	45,849
544.90	35,501	47,622
544.95	35,610	49,400
545.00	35,719	51,183
545.05	35,828	52,971
545.10	35,937	54,766
545.15	36,046	56,565
545.20	36,155	58,370
545.25	36,264	60,181
545.30	36,372	61,996
545.35	36,481	63,818
545.40	36,590	65,645
545.45	36,699	67,477
545.50	36,808	69,315
545.55	36,917	71,158
545.60	37,026	73,006
545.65	37,135	74,860
545.70	37,244	76,720
545.75	37,353	78,585
545.80	37,461	80,455
545.85	37,570	82,331
545.90	37,679	84,212
545.95	37,788	86,099
546.00	37,897	87,991
546.05	37,984	89,888
546.10	38,071	91,789
546.15	38,158	93,695
546.20	38,246	95,605
546.25	38,333	97,519
546.30	38,420	99,438
546.35	38,507	101,361
546.40	38,594	103,289
546.45	38,681	105,221
546.50	38,769	107,157
546.55	38,856	109,098
546.60	38,943	111,043
546.65	39,030	112,992
546.70	39,117	114,946
546.75	39,204	116,904
546.80	39,291	118,866
546.85	39,379	120,833
546.90	39,466	122,804
546.95	39,553	124,779
547.00	**39,640**	**126,759**

Summary for Pond 18P: Basin 5

Inflow Area = 46,603 sf, 92.63% Impervious, Inflow Depth = 8.21" for 100-Year event
Inflow = 9.58 cfs @ 12.10 hrs, Volume= 31,869 cf
Outflow = 6.04 cfs @ 12.13 hrs, Volume= 31,869 cf, Atten= 37%, Lag= 1.7 min
Discarded = 1.37 cfs @ 11.57 hrs, Volume= 26,451 cf
Primary = 4.67 cfs @ 12.13 hrs, Volume= 5,418 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 579.76' @ 12.13 hrs Surf.Area= 14,810 sf Storage= 4,513 cf

Plug-Flow detention time= 8.7 min calculated for 31,869 cf (100% of inflow)
Center-of-Mass det. time= 8.7 min (749.8 - 741.1)

Volume	Invert	Avail.Storage	Storage Description
#1	579.00'	31,397 cf	**Custom Stage Data (Prismatic)** Listed below 78,493 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
579.00	14,810	0	0
580.00	14,810	14,810	14,810
581.00	14,810	14,810	29,620
582.00	14,810	14,810	44,430
583.00	14,810	14,810	59,240
584.00	14,810	14,810	74,050
584.30	14,810	4,443	78,493

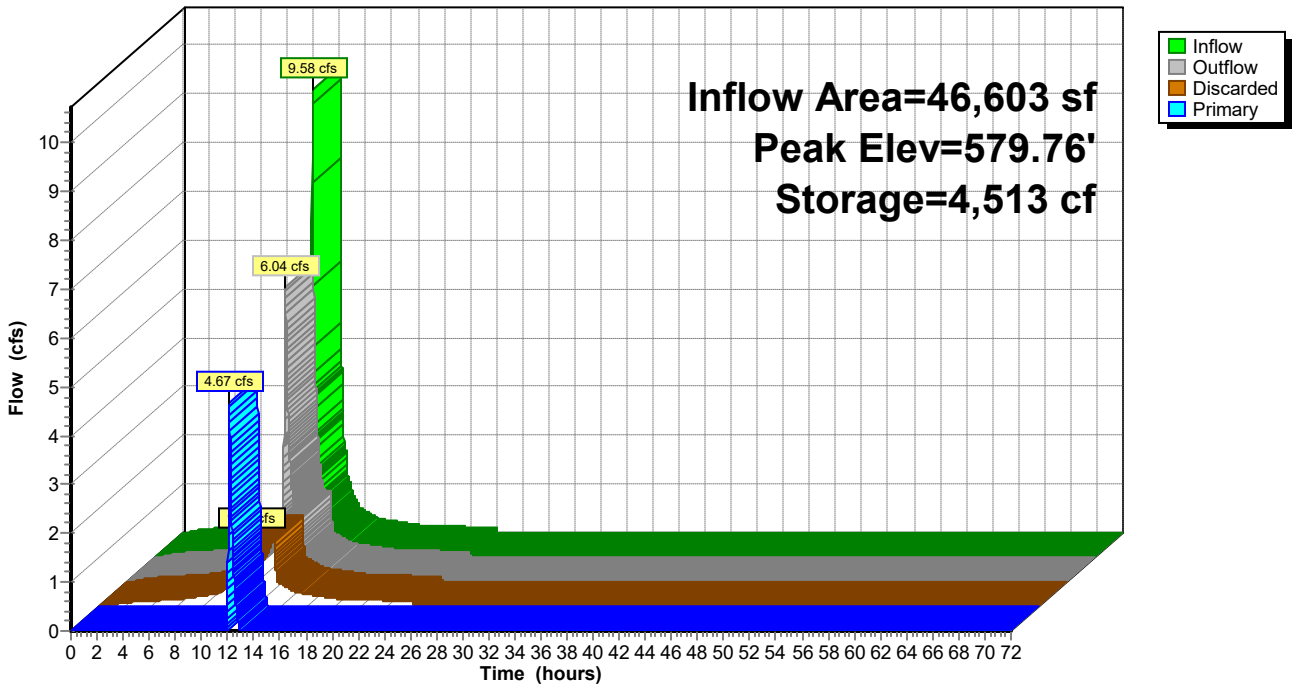
Device	Routing	Invert	Outlet Devices
#1	Primary	579.25'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	579.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=1.37 cfs @ 11.57 hrs HW=579.05' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.37 cfs)

Primary OutFlow Max=4.66 cfs @ 12.13 hrs HW=579.76' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 4.66 cfs @ 2.34 fps)

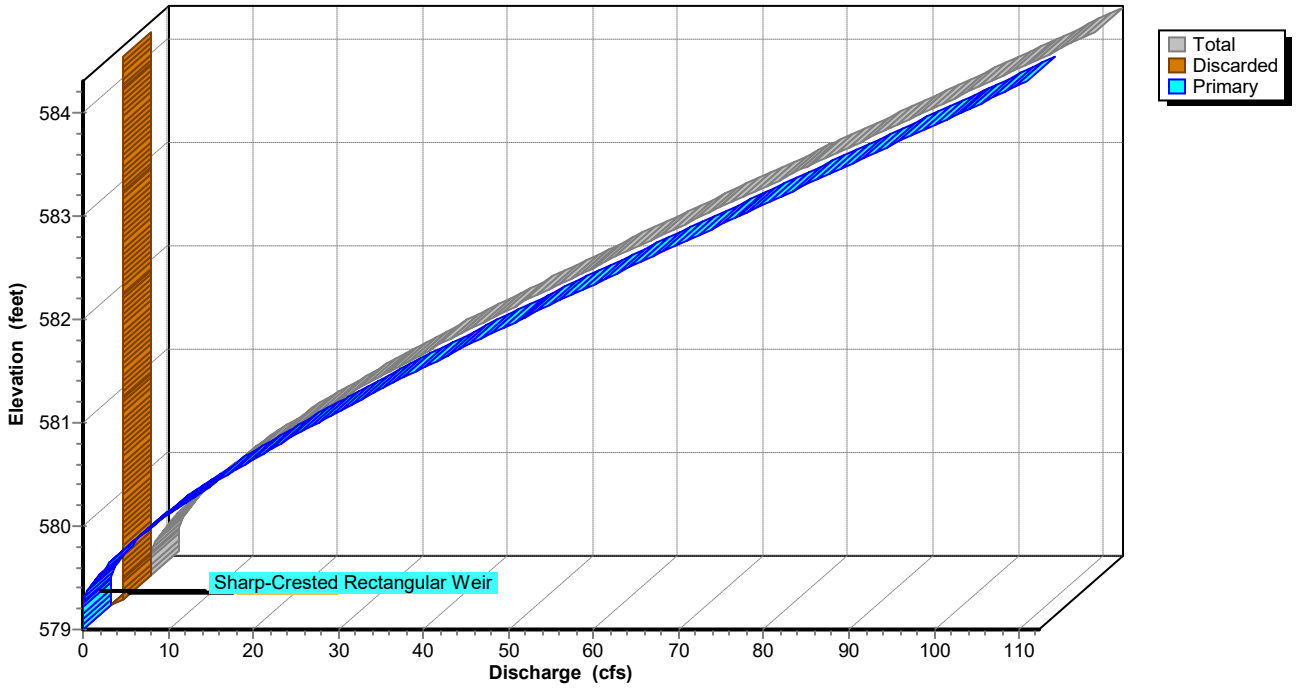
Pond 18P: Basin 5

Hydrograph



Pond 18P: Basin 5

Stage-Discharge



Hydrograph for Pond 18P: Basin 5

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	579.00	0.00	0.00	0.00
2.00	0.08	17	579.00	0.08	0.08	0.00
4.00	0.12	27	579.00	0.12	0.12	0.00
6.00	0.14	33	579.01	0.14	0.14	0.00
8.00	0.23	52	579.01	0.22	0.22	0.00
10.00	0.41	93	579.02	0.41	**0.41**	0.00
12.00	**5.72**	**2,560**	**579.43**	**2.38**	**1.37**	**1.01**
14.00	**0.45**	**104**	**579.02**	**0.45**	0.45	**0.00**
16.00	0.25	57	579.01	0.25	0.25	0.00
18.00	0.17	39	579.01	0.17	0.17	0.00
20.00	0.14	33	579.01	0.14	0.14	0.00
22.00	0.12	28	579.00	0.12	0.12	0.00
24.00	0.10	23	579.00	0.10	0.10	0.00
26.00	0.00	0	579.00	0.00	0.00	0.00
28.00	0.00	0	579.00	0.00	0.00	0.00
30.00	0.00	0	579.00	0.00	0.00	0.00
32.00	0.00	0	579.00	0.00	0.00	0.00
34.00	0.00	0	579.00	0.00	0.00	0.00
36.00	0.00	0	579.00	0.00	0.00	0.00
38.00	0.00	0	579.00	0.00	0.00	0.00
40.00	0.00	0	579.00	0.00	0.00	0.00
42.00	0.00	0	579.00	0.00	0.00	0.00
44.00	0.00	0	579.00	0.00	0.00	0.00
46.00	0.00	0	579.00	0.00	0.00	0.00
48.00	0.00	0	579.00	0.00	0.00	0.00
50.00	0.00	0	579.00	0.00	0.00	0.00
52.00	0.00	0	579.00	0.00	0.00	0.00
54.00	0.00	0	579.00	0.00	0.00	0.00
56.00	0.00	0	579.00	0.00	0.00	0.00
58.00	0.00	0	579.00	0.00	0.00	0.00
60.00	0.00	0	579.00	0.00	0.00	0.00
62.00	0.00	0	579.00	0.00	0.00	0.00
64.00	0.00	0	579.00	0.00	0.00	0.00
66.00	0.00	0	579.00	0.00	0.00	0.00
68.00	0.00	0	579.00	0.00	0.00	0.00
70.00	0.00	0	579.00	0.00	0.00	0.00
72.00	0.00	0	579.00	0.00	0.00	0.00

Stage-Discharge for Pond 18P: Basin 5

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
579.00	0.00	**0.00**	0.00
579.10	1.37	**1.37**	0.00
579.20	1.37	1.37	0.00
579.30	1.52	1.37	0.15
579.40	2.13	1.37	0.75
579.50	2.99	1.37	1.61
579.60	4.03	1.37	2.66
579.70	5.23	1.37	3.86
579.80	6.56	1.37	5.19
579.90	8.00	1.37	6.63
580.00	9.55	1.37	8.18
580.10	11.19	1.37	9.81
580.20	12.91	1.37	11.54
580.30	14.71	1.37	13.33
580.40	16.57	1.37	15.20
580.50	18.51	1.37	17.14
580.60	20.50	1.37	19.13
580.70	22.55	1.37	21.18
580.80	24.66	1.37	23.28
580.90	26.81	1.37	25.44
581.00	29.00	1.37	27.63
581.10	31.24	1.37	29.87
581.20	33.52	1.37	32.14
581.30	35.83	1.37	34.46
581.40	38.17	1.37	36.80
581.50	40.55	1.37	39.18
581.60	42.96	1.37	41.58
581.70	45.39	1.37	44.02
581.80	47.84	1.37	46.47
581.90	50.32	1.37	48.95
582.00	52.82	1.37	51.45
582.10	55.34	1.37	53.96
582.20	57.87	1.37	56.50
582.30	60.42	1.37	59.05
582.40	62.98	1.37	61.61
582.50	65.55	1.37	64.18
582.60	68.14	1.37	66.77
582.70	70.73	1.37	69.36
582.80	73.33	1.37	71.96
582.90	75.94	1.37	74.56
583.00	78.55	1.37	77.18
583.10	81.16	1.37	79.79
583.20	83.78	1.37	82.40
583.30	86.39	1.37	85.02
583.40	89.01	1.37	87.64
583.50	91.62	1.37	90.25
583.60	94.23	1.37	92.86
583.70	96.84	1.37	95.47
583.80	99.44	1.37	98.07
583.90	102.03	1.37	100.66
584.00	104.62	1.37	103.25
584.10	107.20	1.37	105.83
584.20	109.77	1.37	108.40
584.30	**112.33**	1.37	**110.96**

Stage-Area-Storage for Pond 18P: Basin 5

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
579.00	**14,810**	0
579.10	14,810	592
579.20	14,810	1,185
579.30	14,810	1,777
579.40	14,810	2,370
579.50	14,810	2,962
579.60	14,810	3,554
579.70	14,810	4,147
579.80	14,810	4,739
579.90	14,810	5,332
580.00	14,810	5,924
580.10	14,810	6,516
580.20	14,810	7,109
580.30	14,810	7,701
580.40	14,810	8,294
580.50	14,810	8,886
580.60	14,810	9,478
580.70	14,810	10,071
580.80	14,810	10,663
580.90	14,810	11,256
581.00	14,810	11,848
581.10	14,810	12,440
581.20	14,810	13,033
581.30	14,810	13,625
581.40	14,810	14,218
581.50	14,810	14,810
581.60	14,810	15,402
581.70	14,810	15,995
581.80	14,810	16,587
581.90	14,810	17,180
582.00	14,810	17,772
582.10	14,810	18,364
582.20	14,810	18,957
582.30	14,810	19,549
582.40	14,810	20,142
582.50	14,810	20,734
582.60	14,810	21,326
582.70	14,810	21,919
582.80	14,810	22,511
582.90	14,810	23,104
583.00	14,810	23,696
583.10	14,810	24,288
583.20	14,810	24,881
583.30	14,810	25,473
583.40	14,810	26,066
583.50	14,810	26,658
583.60	14,810	27,250
583.70	14,810	27,843
583.80	14,810	28,435
583.90	14,810	29,028
584.00	14,810	29,620
584.10	14,810	30,212
584.20	14,810	30,805
584.30	14,810	**31,397**

Summary for Pond 24P: Basin 6

Inflow Area = 180,292 sf, 63.14% Impervious, Inflow Depth = 7.35" for 100-Year event
Inflow = 33.86 cfs @ 12.11 hrs, Volume= 110,442 cf
Outflow = 19.94 cfs @ 12.16 hrs, Volume= 110,442 cf, Atten= 41%, Lag= 3.2 min
Discarded = 8.27 cfs @ 11.83 hrs, Volume= 97,656 cf
Primary = 11.67 cfs @ 12.16 hrs, Volume= 12,785 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 600.74' @ 12.16 hrs Surf.Area= 35,719 sf Storage= 10,554 cf

Plug-Flow detention time= 2.5 min calculated for 110,426 cf (100% of inflow)
Center-of-Mass det. time= 2.5 min (763.5 - 761.0)

Volume	Invert	Avail.Storage	Storage Description
#1	600.00'	20,288 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 50,721 cf Overall x 40.0% Voids

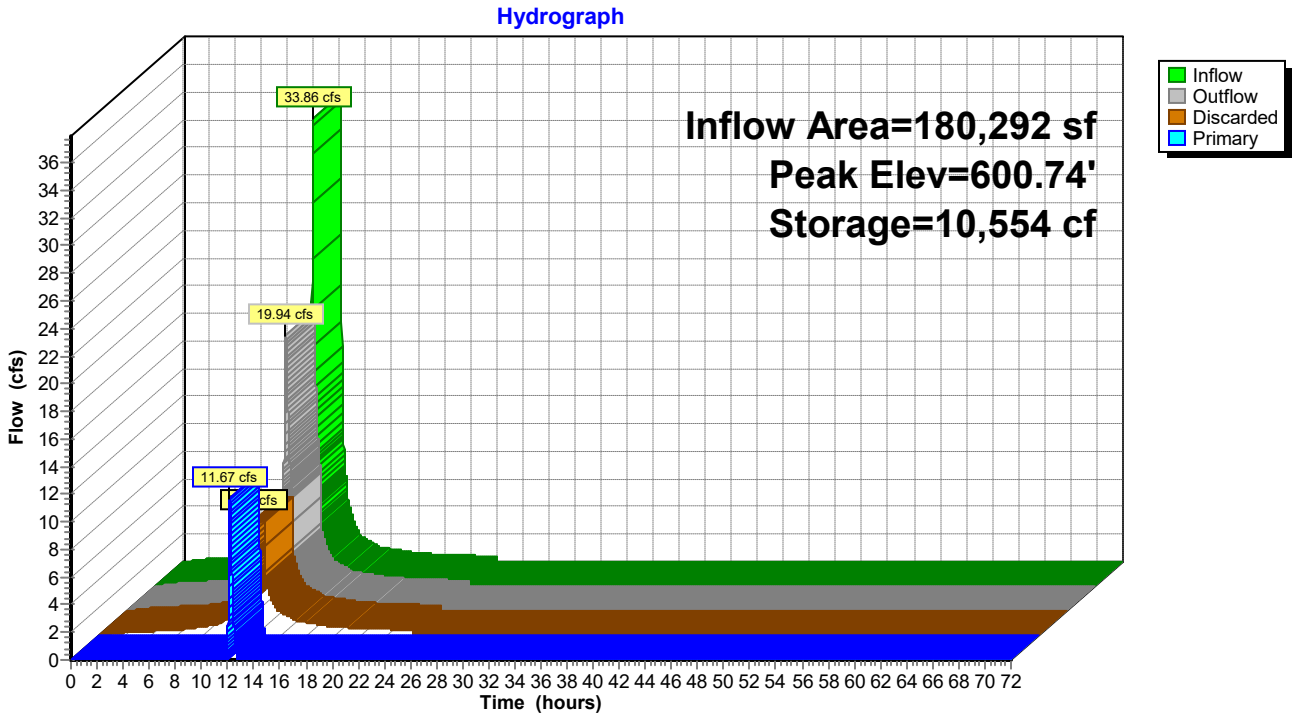
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
600.00	35,719	0	0
601.00	35,719	35,719	35,719
601.42	35,719	15,002	50,721

Device	Routing	Invert	Outlet Devices
#1	Primary	600.02'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	600.00'	**10.000 in/hr Exfiltration over Surface area**

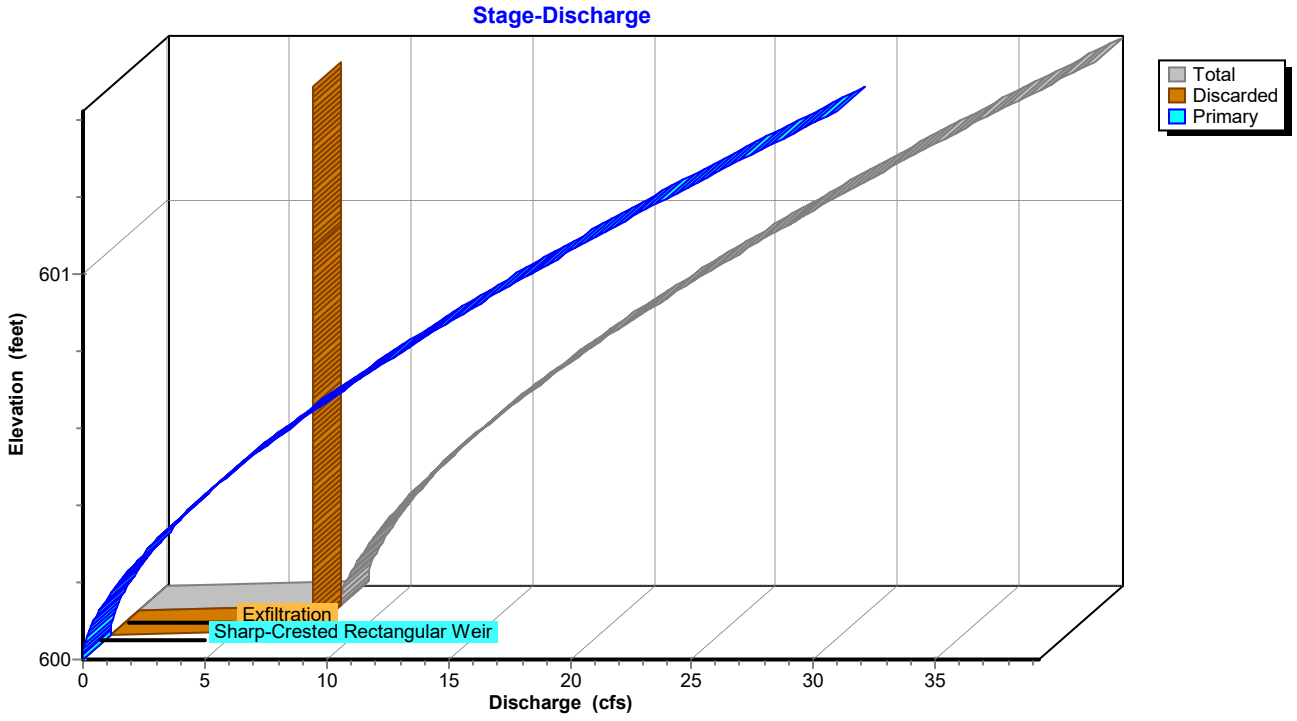
Discarded OutFlow Max=8.27 cfs @ 11.83 hrs HW=600.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 8.27 cfs)

Primary OutFlow Max=11.66 cfs @ 12.16 hrs HW=600.74' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 11.66 cfs @ 2.77 fps)

Pond 24P: Basin 6



Pond 24P: Basin 6



Hydrograph for Pond 24P: Basin 6

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	600.00	0.00	0.00	0.00
2.00	0.20	5	600.00	0.20	0.20	0.00
4.00	0.31	8	600.00	0.31	0.31	0.00
6.00	0.38	9	600.00	0.38	0.38	0.00
8.00	0.66	16	600.00	0.66	0.66	0.00
10.00	1.29	32	600.00	1.29	**1.29**	0.00
12.00	**19.68**	**3,092**	**600.22**	**9.97**	**8.27**	**1.70**
14.00	**1.66**	**41**	**600.00**	**1.67**	1.67	**0.00**
16.00	0.93	23	600.00	0.93	0.93	0.00
18.00	0.63	15	600.00	0.63	0.63	0.00
20.00	0.54	13	600.00	0.54	0.54	0.00
22.00	0.46	11	600.00	0.46	0.46	0.00
24.00	0.38	9	600.00	0.38	0.38	0.00
26.00	0.00	0	600.00	0.00	0.00	0.00
28.00	0.00	0	600.00	0.00	0.00	0.00
30.00	0.00	0	600.00	0.00	0.00	0.00
32.00	0.00	0	600.00	0.00	0.00	0.00
34.00	0.00	0	600.00	0.00	0.00	0.00
36.00	0.00	0	600.00	0.00	0.00	0.00
38.00	0.00	0	600.00	0.00	0.00	0.00
40.00	0.00	0	600.00	0.00	0.00	0.00
42.00	0.00	0	600.00	0.00	0.00	0.00
44.00	0.00	0	600.00	0.00	0.00	0.00
46.00	0.00	0	600.00	0.00	0.00	0.00
48.00	0.00	0	600.00	0.00	0.00	0.00
50.00	0.00	0	600.00	0.00	0.00	0.00
52.00	0.00	0	600.00	0.00	0.00	0.00
54.00	0.00	0	600.00	0.00	0.00	0.00
56.00	0.00	0	600.00	0.00	0.00	0.00
58.00	0.00	0	600.00	0.00	0.00	0.00
60.00	0.00	0	600.00	0.00	0.00	0.00
62.00	0.00	0	600.00	0.00	0.00	0.00
64.00	0.00	0	600.00	0.00	0.00	0.00
66.00	0.00	0	600.00	0.00	0.00	0.00
68.00	0.00	0	600.00	0.00	0.00	0.00
70.00	0.00	0	600.00	0.00	0.00	0.00
72.00	0.00	0	600.00	0.00	0.00	0.00

Stage-Discharge for Pond 24P: Basin 6

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
600.00	0.00	**0.00**	0.00
600.02	8.27	**8.27**	0.00
600.04	8.32	8.27	0.06
600.06	8.43	8.27	0.16
600.08	8.56	8.27	0.29
600.10	8.71	8.27	0.44
600.12	8.89	8.27	0.62
600.14	9.08	8.27	0.81
600.16	9.29	8.27	1.02
600.18	9.52	8.27	1.25
600.20	9.76	8.27	1.49
600.22	10.01	8.27	1.74
600.24	10.28	8.27	2.01
600.26	10.56	8.27	2.29
600.28	10.85	8.27	2.58
600.30	11.15	8.27	2.88
600.32	11.46	8.27	3.19
600.34	11.78	8.27	3.51
600.36	12.11	8.27	3.85
600.38	12.46	8.27	4.19
600.40	12.81	8.27	4.54
600.42	13.17	8.27	4.90
600.44	13.53	8.27	5.27
600.46	13.91	8.27	5.64
600.48	14.30	8.27	6.03
600.50	14.69	8.27	6.42
600.52	15.09	8.27	6.82
600.54	15.50	8.27	7.23
600.56	15.91	8.27	7.65
600.58	16.34	8.27	8.07
600.60	16.77	8.27	8.50
600.62	17.20	8.27	8.94
600.64	17.65	8.27	9.38
600.66	18.10	8.27	9.83
600.68	18.56	8.27	10.29
600.70	19.02	8.27	10.75
600.72	19.49	8.27	11.22
600.74	19.97	8.27	11.70
600.76	20.45	8.27	12.18
600.78	20.94	8.27	12.67
600.80	21.43	8.27	13.16
600.82	21.93	8.27	13.66
600.84	22.44	8.27	14.17
600.86	22.95	8.27	14.68
600.88	23.47	8.27	15.20
600.90	23.99	8.27	15.72
600.92	24.52	8.27	16.25
600.94	25.05	8.27	16.78
600.96	25.59	8.27	17.32
600.98	26.13	8.27	17.86
601.00	26.68	8.27	18.41
601.02	27.23	8.27	18.97
601.04	27.79	8.27	19.52
601.06	28.36	8.27	20.09
601.08	28.92	8.27	20.66
601.10	29.50	8.27	21.23
601.12	30.07	8.27	21.81
601.14	30.66	8.27	22.39
601.16	31.24	8.27	22.97
601.18	31.83	8.27	23.56
601.20	32.43	8.27	24.16
601.22	33.03	8.27	24.76
601.24	33.63	8.27	25.36
601.26	34.24	8.27	25.97
601.28	34.85	8.27	26.58
601.30	35.47	8.27	27.20
601.32	36.09	8.27	27.82
601.34	36.71	8.27	28.45
601.36	37.34	8.27	29.07
601.38	37.98	8.27	29.71
601.40	38.61	8.27	30.34
601.42	**39.25**	8.27	**30.98**

Stage-Area-Storage for Pond 24P: Basin 6

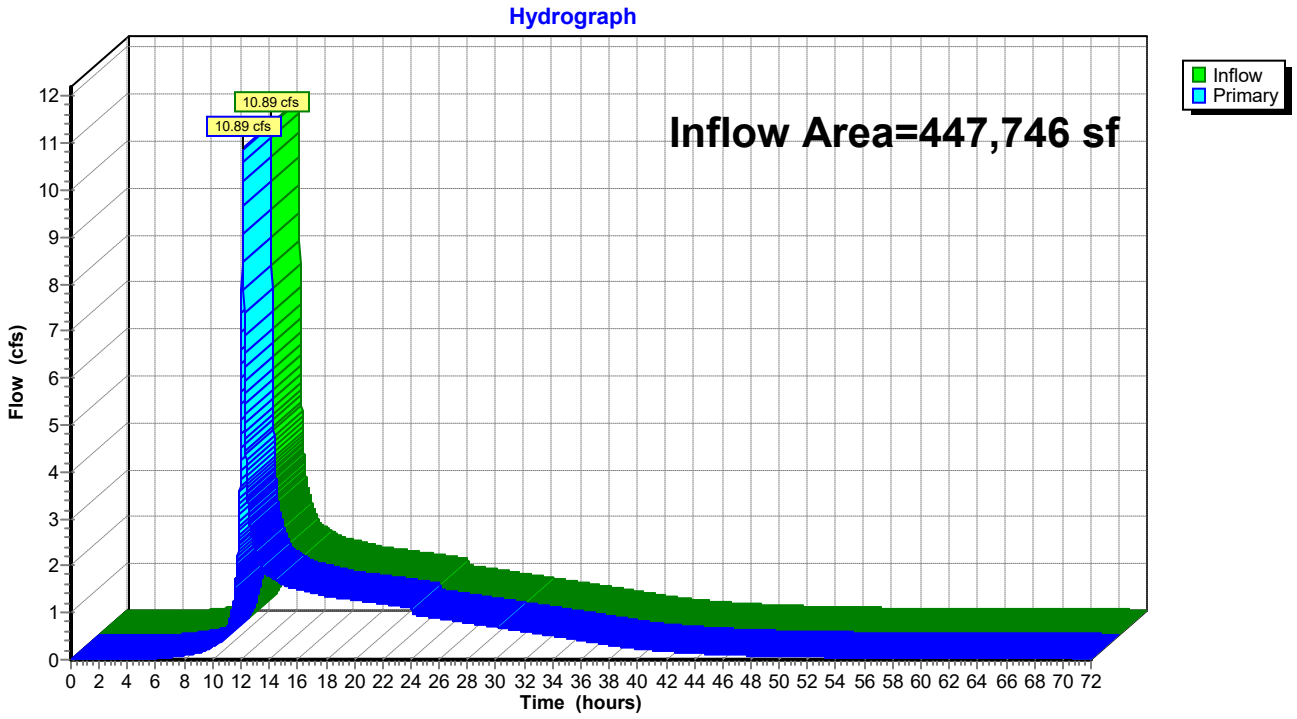
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
600.00	**35,719**	0
600.02	35,719	286
600.04	35,719	572
600.06	35,719	857
600.08	35,719	1,143
600.10	35,719	1,429
600.12	35,719	1,715
600.14	35,719	2,000
600.16	35,719	2,286
600.18	35,719	2,572
600.20	35,719	2,858
600.22	35,719	3,143
600.24	35,719	3,429
600.26	35,719	3,715
600.28	35,719	4,001
600.30	35,719	4,286
600.32	35,719	4,572
600.34	35,719	4,858
600.36	35,719	5,144
600.38	35,719	5,429
600.40	35,719	5,715
600.42	35,719	6,001
600.44	35,719	6,287
600.46	35,719	6,572
600.48	35,719	6,858
600.50	35,719	7,144
600.52	35,719	7,430
600.54	35,719	7,715
600.56	35,719	8,001
600.58	35,719	8,287
600.60	35,719	8,573
600.62	35,719	8,858
600.64	35,719	9,144
600.66	35,719	9,430
600.68	35,719	9,716
600.70	35,719	10,001
600.72	35,719	10,287
600.74	35,719	10,573
600.76	35,719	10,859
600.78	35,719	11,144
600.80	35,719	11,430
600.82	35,719	11,716
600.84	35,719	12,002
600.86	35,719	12,287
600.88	35,719	12,573
600.90	35,719	12,859
600.92	35,719	13,145
600.94	35,719	13,430
600.96	35,719	13,716
600.98	35,719	14,002
601.00	35,719	14,288
601.02	35,719	14,573
601.04	35,719	14,859
601.06	35,719	15,145
601.08	35,719	15,431
601.10	35,719	15,716
601.12	35,719	16,002
601.14	35,719	16,288
601.16	35,719	16,574
601.18	35,719	16,859
601.20	35,719	17,145
601.22	35,719	17,431
601.24	35,719	17,717
601.26	35,719	18,002
601.28	35,719	18,288
601.30	35,719	18,574
601.32	35,719	18,860
601.34	35,719	19,145
601.36	35,719	19,431
601.38	35,719	19,717
601.40	35,719	20,003
601.42	35,719	**20,288**

Summary for Link 25L: POA 1

Inflow Area = 447,746 sf, 43.41% Impervious, Inflow Depth > 3.32" for 100-Year event
Inflow = 10.89 cfs @ 12.14 hrs, Volume= 123,695 cf
Primary = 10.89 cfs @ 12.14 hrs, Volume= 123,695 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 25L: POA 1



Hydrograph for Link 25L: POA 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	51.00	0.07	0.00	0.07
1.00	0.00	0.00	0.00	52.00	0.06	0.00	0.06
2.00	0.00	0.00	0.00	53.00	0.06	0.00	0.06
3.00	0.00	0.00	0.00	54.00	0.05	0.00	0.05
4.00	0.00	0.00	0.00	55.00	0.05	0.00	0.05
5.00	0.00	0.00	0.00	56.00	0.05	0.00	0.05
6.00	0.02	0.00	0.02	57.00	0.04	0.00	0.04
7.00	0.05	0.00	0.05	58.00	0.04	0.00	0.04
8.00	0.10	0.00	0.10	59.00	0.04	0.00	0.04
9.00	0.15	0.00	0.15	60.00	0.03	0.00	0.03
10.00	0.29	0.00	0.29	61.00	0.03	0.00	0.03
11.00	0.65	0.00	0.65	62.00	0.03	0.00	0.03
12.00	**5.44**	0.00	**5.44**	63.00	0.03	0.00	0.03
13.00	**2.36**	0.00	**2.36**	64.00	0.03	0.00	0.03
14.00	1.78	0.00	1.78	65.00	0.03	0.00	0.03
15.00	1.59	0.00	1.59	66.00	0.02	0.00	0.02
16.00	1.51	0.00	1.51	67.00	0.02	0.00	0.02
17.00	1.44	0.00	1.44	68.00	0.02	0.00	0.02
18.00	1.36	0.00	1.36	69.00	0.02	0.00	0.02
19.00	1.31	0.00	1.31	70.00	0.02	0.00	0.02
20.00	1.28	0.00	1.28	71.00	0.02	0.00	0.02
21.00	1.24	0.00	1.24	72.00	0.02	0.00	0.02
22.00	1.19	0.00	1.19				
23.00	1.15	0.00	1.15				
24.00	1.11	0.00	1.11				
25.00	0.93	0.00	0.93				
26.00	0.88	0.00	0.88				
27.00	0.84	0.00	0.84				
28.00	0.79	0.00	0.79				
29.00	0.74	0.00	0.74				
30.00	0.70	0.00	0.70				
31.00	0.65	0.00	0.65				
32.00	0.60	0.00	0.60				
33.00	0.56	0.00	0.56				
34.00	0.51	0.00	0.51				
35.00	0.47	0.00	0.47				
36.00	0.42	0.00	0.42				
37.00	0.36	0.00	0.36				
38.00	0.32	0.00	0.32				
39.00	0.27	0.00	0.27				
40.00	0.24	0.00	0.24				
41.00	0.21	0.00	0.21				
42.00	0.18	0.00	0.18				
43.00	0.16	0.00	0.16				
44.00	0.14	0.00	0.14				
45.00	0.13	0.00	0.13				
46.00	0.11	0.00	0.11				
47.00	0.10	0.00	0.10				
48.00	0.09	0.00	0.09				
49.00	0.08	0.00	0.08				
50.00	0.08	0.00	0.08				

Summary for Subcatchment 14S: Basin 1 - Imp

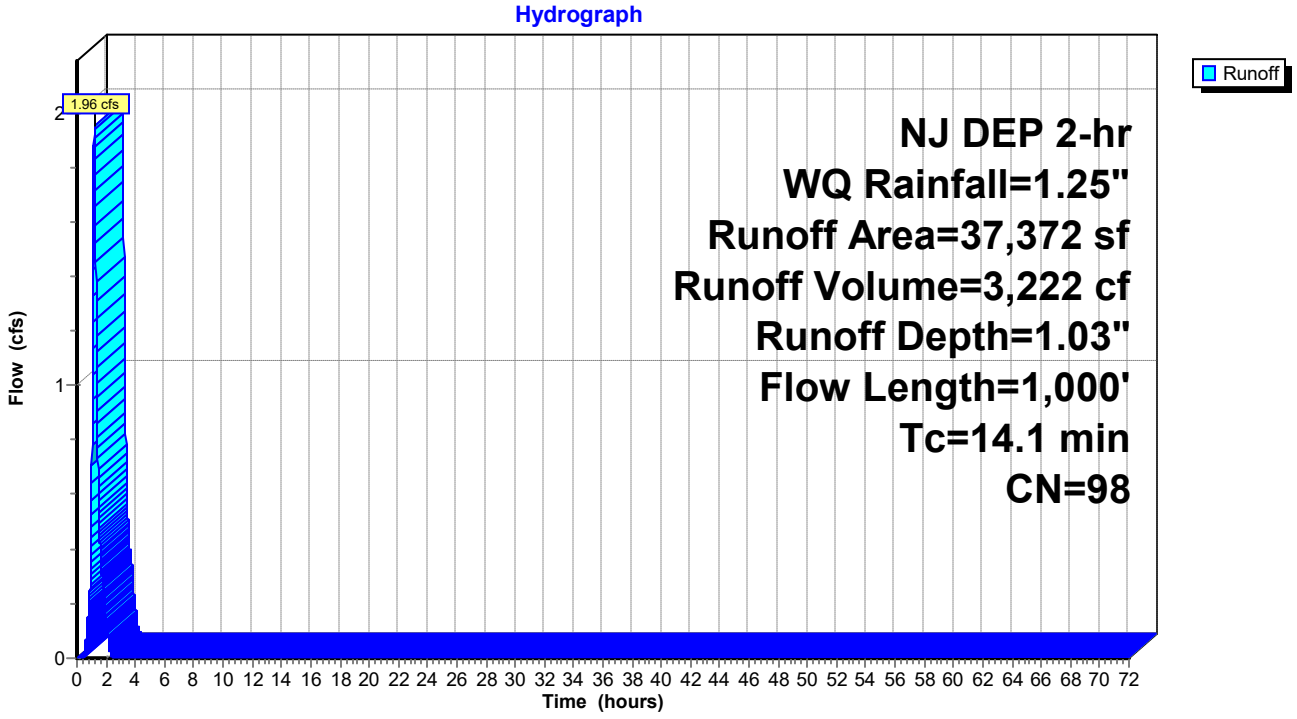
Runoff = 1.96 cfs @ 1.19 hrs, Volume= 3,222 cf, Depth= 1.03"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
8,944	98	Paved parking, HSG D
28,428	98	Paved parking, HSG C
37,372	98	Weighted Average
37,372		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 14S: Basin 1 - Imp



Hydrograph for Subcatchment 14S: Basin 1 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.63	0.43	**0.58**
2.00	**1.25**	**1.03**	**0.14**
3.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00
5.00	1.25	1.03	0.00
6.00	1.25	1.03	0.00
7.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00
9.00	1.25	1.03	0.00
10.00	1.25	1.03	0.00
11.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00
13.00	1.25	1.03	0.00
14.00	1.25	1.03	0.00
15.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00
17.00	1.25	1.03	0.00
18.00	1.25	1.03	0.00
19.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00
21.00	1.25	1.03	0.00
22.00	1.25	1.03	0.00
23.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00
25.00	1.25	1.03	0.00
26.00	1.25	1.03	0.00
27.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00
29.00	1.25	1.03	0.00
30.00	1.25	1.03	0.00
31.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00
33.00	1.25	1.03	0.00
34.00	1.25	1.03	0.00
35.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00
37.00	1.25	1.03	0.00
38.00	1.25	1.03	0.00
39.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00
41.00	1.25	1.03	0.00
42.00	1.25	1.03	0.00
43.00	1.25	1.03	0.00
44.00	1.25	1.03	0.00
45.00	1.25	1.03	0.00
46.00	1.25	1.03	0.00
47.00	1.25	1.03	0.00
48.00	1.25	1.03	0.00
49.00	1.25	1.03	0.00
50.00	1.25	1.03	0.00
51.00	1.25	1.03	0.00
52.00	1.25	1.03	0.00
53.00	1.25	1.03	0.00
54.00	1.25	1.03	0.00
55.00	1.25	1.03	0.00
56.00	1.25	1.03	0.00
57.00	1.25	1.03	0.00
58.00	1.25	1.03	0.00
59.00	1.25	1.03	0.00
60.00	1.25	1.03	0.00
61.00	1.25	1.03	0.00
62.00	1.25	1.03	0.00
63.00	1.25	1.03	0.00
64.00	1.25	1.03	0.00
65.00	1.25	1.03	0.00
66.00	1.25	1.03	0.00
67.00	1.25	1.03	0.00
68.00	1.25	1.03	0.00
69.00	1.25	1.03	0.00
70.00	1.25	1.03	0.00
71.00	1.25	1.03	0.00
72.00	1.25	1.03	0.00

Summary for Subcatchment 15S: Basin 1 - Perv

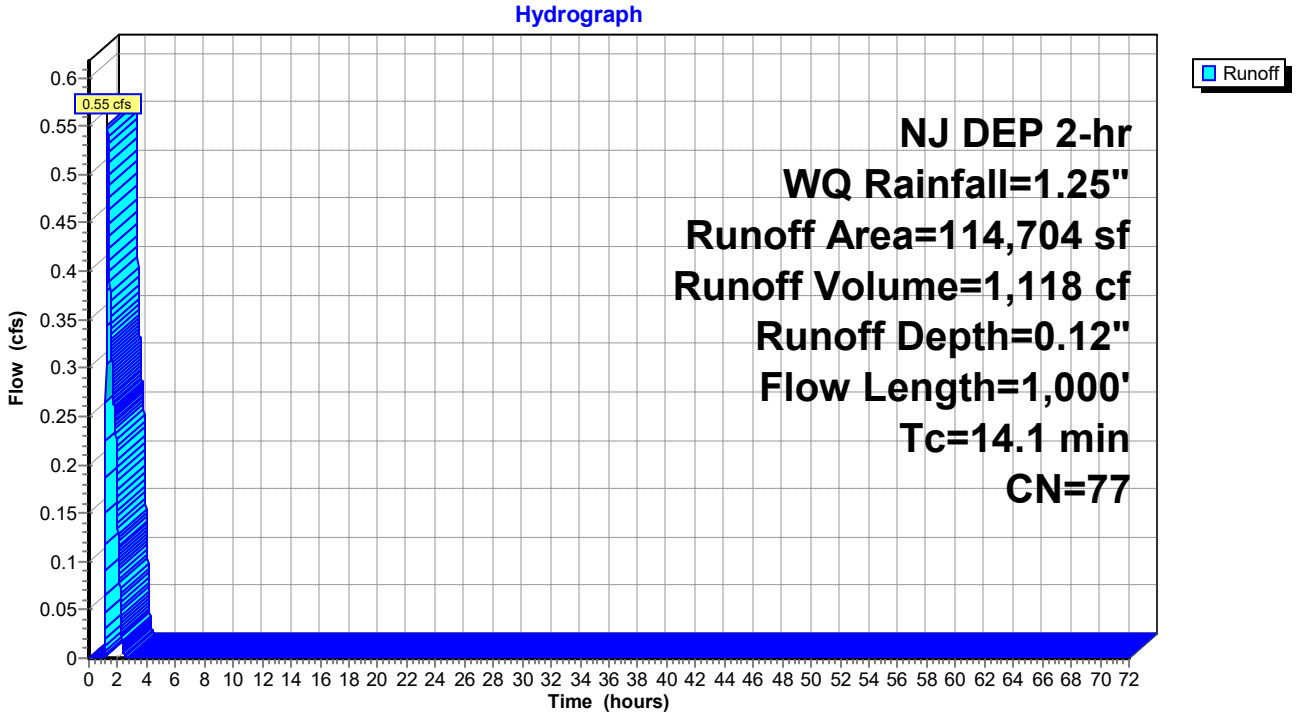
Runoff = 0.55 cfs @ 1.30 hrs, Volume= 1,118 cf, Depth= 0.12"
Routed to Pond 16P : Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
65,014	80	>75% Grass cover, Good, HSG D
49,690	74	>75% Grass cover, Good, HSG C
114,704	77	Weighted Average
114,704		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.7	425	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
3.4	516		2.50		**Direct Entry, Pipe Flow (C-D)**
14.1	1,000	Total			

Subcatchment 15S: Basin 1 - Perv



Hydrograph for Subcatchment 15S: Basin 1 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.63	0.00	**0.00**
2.00	**1.25**	**0.12**	**0.13**
3.00	1.25	0.12	0.00
4.00	1.25	0.12	0.00
5.00	1.25	0.12	0.00
6.00	1.25	0.12	0.00
7.00	1.25	0.12	0.00
8.00	1.25	0.12	0.00
9.00	1.25	0.12	0.00
10.00	1.25	0.12	0.00
11.00	1.25	0.12	0.00
12.00	1.25	0.12	0.00
13.00	1.25	0.12	0.00
14.00	1.25	0.12	0.00
15.00	1.25	0.12	0.00
16.00	1.25	0.12	0.00
17.00	1.25	0.12	0.00
18.00	1.25	0.12	0.00
19.00	1.25	0.12	0.00
20.00	1.25	0.12	0.00
21.00	1.25	0.12	0.00
22.00	1.25	0.12	0.00
23.00	1.25	0.12	0.00
24.00	1.25	0.12	0.00
25.00	1.25	0.12	0.00
26.00	1.25	0.12	0.00
27.00	1.25	0.12	0.00
28.00	1.25	0.12	0.00
29.00	1.25	0.12	0.00
30.00	1.25	0.12	0.00
31.00	1.25	0.12	0.00
32.00	1.25	0.12	0.00
33.00	1.25	0.12	0.00
34.00	1.25	0.12	0.00
35.00	1.25	0.12	0.00
36.00	1.25	0.12	0.00
37.00	1.25	0.12	0.00
38.00	1.25	0.12	0.00
39.00	1.25	0.12	0.00
40.00	1.25	0.12	0.00
41.00	1.25	0.12	0.00
42.00	1.25	0.12	0.00
43.00	1.25	0.12	0.00
44.00	1.25	0.12	0.00
45.00	1.25	0.12	0.00
46.00	1.25	0.12	0.00
47.00	1.25	0.12	0.00
48.00	1.25	0.12	0.00
49.00	1.25	0.12	0.00
50.00	1.25	0.12	0.00
51.00	1.25	0.12	0.00
52.00	1.25	0.12	0.00
53.00	1.25	0.12	0.00
54.00	1.25	0.12	0.00
55.00	1.25	0.12	0.00
56.00	1.25	0.12	0.00
57.00	1.25	0.12	0.00
58.00	1.25	0.12	0.00
59.00	1.25	0.12	0.00
60.00	1.25	0.12	0.00
61.00	1.25	0.12	0.00
62.00	1.25	0.12	0.00
63.00	1.25	0.12	0.00
64.00	1.25	0.12	0.00
65.00	1.25	0.12	0.00
66.00	1.25	0.12	0.00
67.00	1.25	0.12	0.00
68.00	1.25	0.12	0.00
69.00	1.25	0.12	0.00
70.00	1.25	0.12	0.00
71.00	1.25	0.12	0.00
72.00	1.25	0.12	0.00

Summary for Subcatchment 17S: Basin 5 - Imp

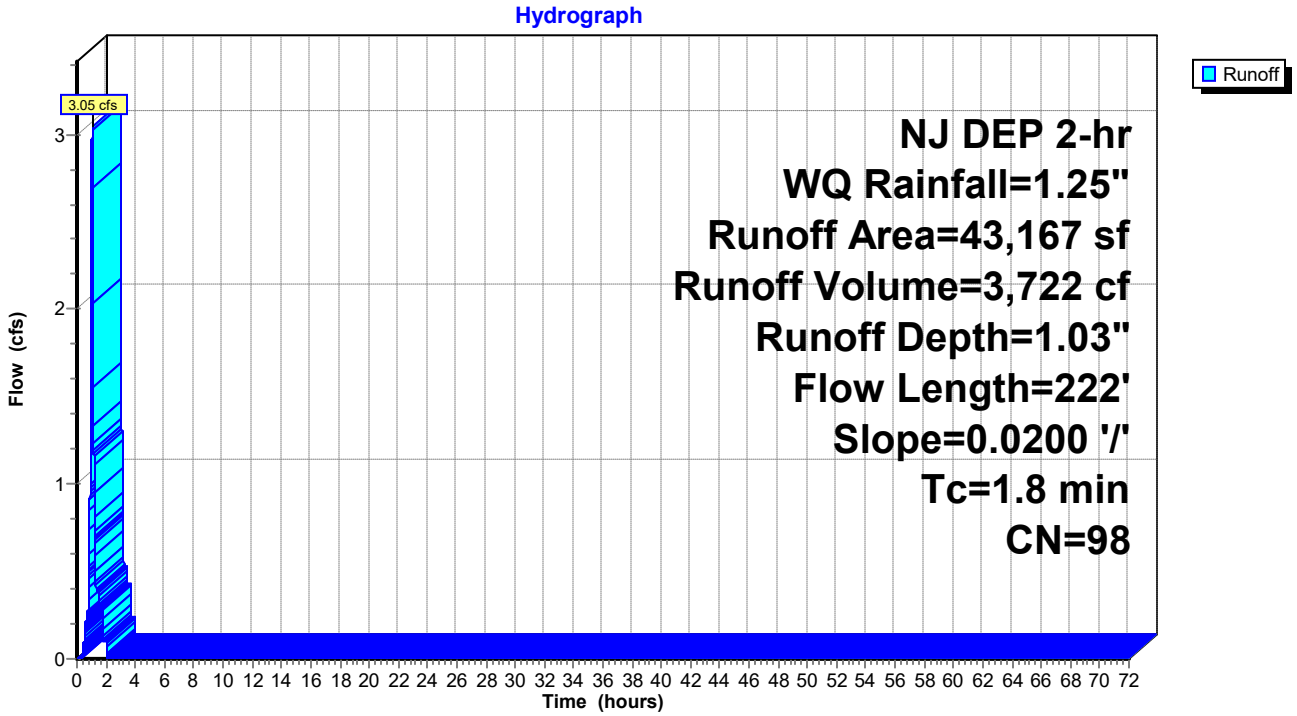
Runoff = 3.05 cfs @ 1.08 hrs, Volume= 3,722 cf, Depth= 1.03"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
26,332	98	Roofs, HSG C
16,835	98	Paved parking, HSG C
43,167	98	Weighted Average
43,167		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 17S: Basin 5 - Imp



Hydrograph for Subcatchment 17S: Basin 5 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.63	0.43	**2.92**
2.00	**1.25**	**1.03**	**0.10**
3.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00
5.00	1.25	1.03	0.00
6.00	1.25	1.03	0.00
7.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00
9.00	1.25	1.03	0.00
10.00	1.25	1.03	0.00
11.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00
13.00	1.25	1.03	0.00
14.00	1.25	1.03	0.00
15.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00
17.00	1.25	1.03	0.00
18.00	1.25	1.03	0.00
19.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00
21.00	1.25	1.03	0.00
22.00	1.25	1.03	0.00
23.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00
25.00	1.25	1.03	0.00
26.00	1.25	1.03	0.00
27.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00
29.00	1.25	1.03	0.00
30.00	1.25	1.03	0.00
31.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00
33.00	1.25	1.03	0.00
34.00	1.25	1.03	0.00
35.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00
37.00	1.25	1.03	0.00
38.00	1.25	1.03	0.00
39.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00
41.00	1.25	1.03	0.00
42.00	1.25	1.03	0.00
43.00	1.25	1.03	0.00
44.00	1.25	1.03	0.00
45.00	1.25	1.03	0.00
46.00	1.25	1.03	0.00
47.00	1.25	1.03	0.00
48.00	1.25	1.03	0.00
49.00	1.25	1.03	0.00
50.00	1.25	1.03	0.00
51.00	1.25	1.03	0.00
52.00	1.25	1.03	0.00
53.00	1.25	1.03	0.00
54.00	1.25	1.03	0.00
55.00	1.25	1.03	0.00
56.00	1.25	1.03	0.00
57.00	1.25	1.03	0.00
58.00	1.25	1.03	0.00
59.00	1.25	1.03	0.00
60.00	1.25	1.03	0.00
61.00	1.25	1.03	0.00
62.00	1.25	1.03	0.00
63.00	1.25	1.03	0.00
64.00	1.25	1.03	0.00
65.00	1.25	1.03	0.00
66.00	1.25	1.03	0.00
67.00	1.25	1.03	0.00
68.00	1.25	1.03	0.00
69.00	1.25	1.03	0.00
70.00	1.25	1.03	0.00
71.00	1.25	1.03	0.00
72.00	1.25	1.03	0.00

Summary for Subcatchment 22S: Basin 6 - Imp

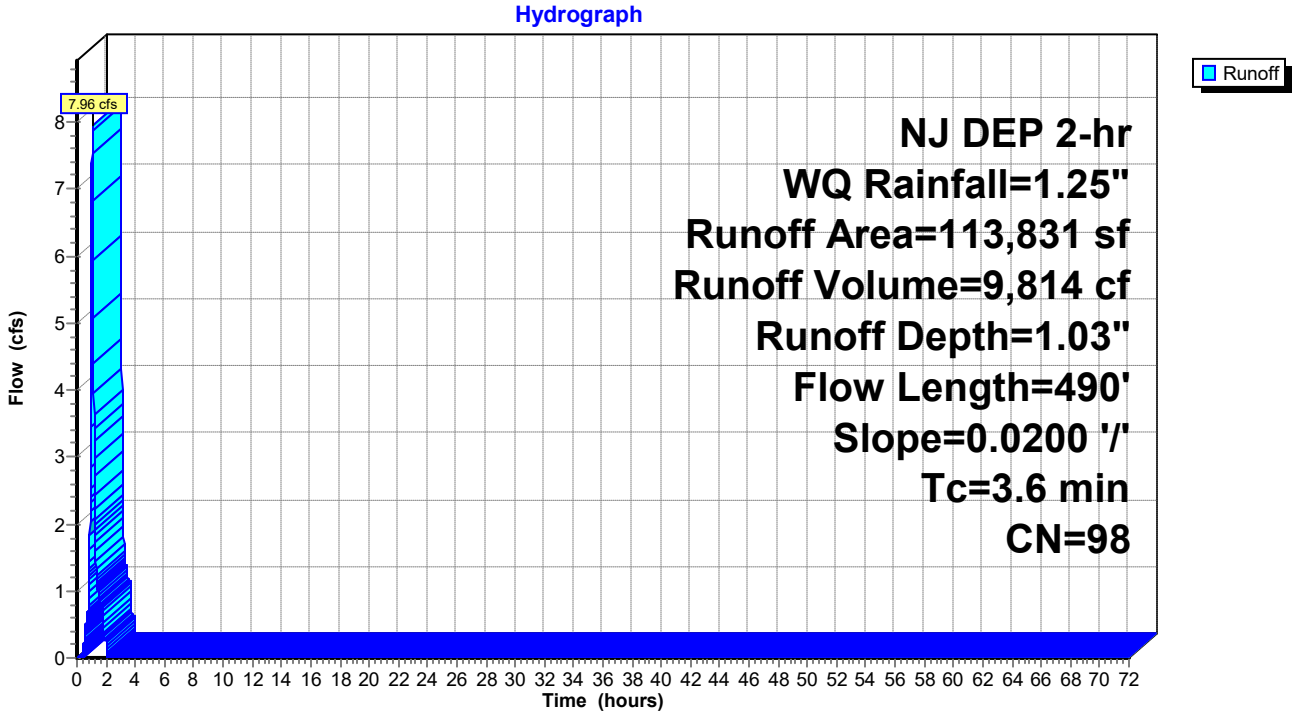
Runoff = 7.96 cfs @ 1.09 hrs, Volume= 9,814 cf, Depth= 1.03"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
10,890	98	Roofs, HSG D
26,136	98	Paved parking, HSG D
41,818	98	Roofs, HSG C
34,987	98	Paved parking, HSG C
113,831	98	Weighted Average
113,831		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 22S: Basin 6 - Imp



Hydrograph for Subcatchment 22S: Basin 6 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	51.00	1.25	1.03	0.00
1.00	0.63	0.43	**6.88**	52.00	1.25	1.03	0.00
2.00	**1.25**	**1.03**	**0.26**	53.00	1.25	1.03	0.00
3.00	1.25	1.03	0.00	54.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	55.00	1.25	1.03	0.00
5.00	1.25	1.03	0.00	56.00	1.25	1.03	0.00
6.00	1.25	1.03	0.00	57.00	1.25	1.03	0.00
7.00	1.25	1.03	0.00	58.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	59.00	1.25	1.03	0.00
9.00	1.25	1.03	0.00	60.00	1.25	1.03	0.00
10.00	1.25	1.03	0.00	61.00	1.25	1.03	0.00
11.00	1.25	1.03	0.00	62.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	63.00	1.25	1.03	0.00
13.00	1.25	1.03	0.00	64.00	1.25	1.03	0.00
14.00	1.25	1.03	0.00	65.00	1.25	1.03	0.00
15.00	1.25	1.03	0.00	66.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	67.00	1.25	1.03	0.00
17.00	1.25	1.03	0.00	68.00	1.25	1.03	0.00
18.00	1.25	1.03	0.00	69.00	1.25	1.03	0.00
19.00	1.25	1.03	0.00	70.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	71.00	1.25	1.03	0.00
21.00	1.25	1.03	0.00	72.00	1.25	1.03	0.00
22.00	1.25	1.03	0.00				
23.00	1.25	1.03	0.00				
24.00	1.25	1.03	0.00				
25.00	1.25	1.03	0.00				
26.00	1.25	1.03	0.00				
27.00	1.25	1.03	0.00				
28.00	1.25	1.03	0.00				
29.00	1.25	1.03	0.00				
30.00	1.25	1.03	0.00				
31.00	1.25	1.03	0.00				
32.00	1.25	1.03	0.00				
33.00	1.25	1.03	0.00				
34.00	1.25	1.03	0.00				
35.00	1.25	1.03	0.00				
36.00	1.25	1.03	0.00				
37.00	1.25	1.03	0.00				
38.00	1.25	1.03	0.00				
39.00	1.25	1.03	0.00				
40.00	1.25	1.03	0.00				
41.00	1.25	1.03	0.00				
42.00	1.25	1.03	0.00				
43.00	1.25	1.03	0.00				
44.00	1.25	1.03	0.00				
45.00	1.25	1.03	0.00				
46.00	1.25	1.03	0.00				
47.00	1.25	1.03	0.00				
48.00	1.25	1.03	0.00				
49.00	1.25	1.03	0.00				
50.00	1.25	1.03	0.00				

Summary for Subcatchment 23S: Basin 6 - Perv

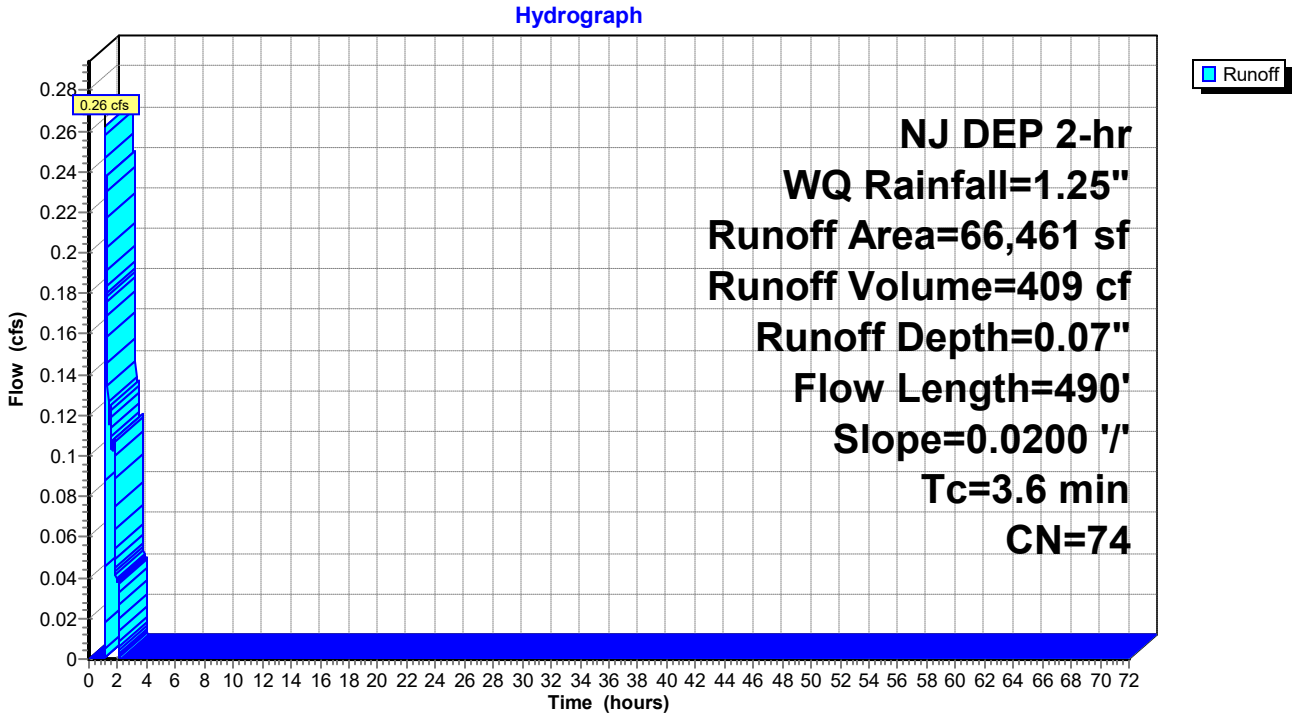
Runoff = 0.26 cfs @ 1.12 hrs, Volume= 409 cf, Depth= 0.07"
Routed to Pond 24P : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
66,461	74	>75% Grass cover, Good, HSG C
66,461		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
3.0	450		2.50		**Direct Entry, Pipe Flow (B-C)**
3.6	490	Total			

Subcatchment 23S: Basin 6 - Perv



Hydrograph for Subcatchment 23S: Basin 6 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.63	0.00	**0.00**
2.00	**1.25**	**0.07**	**0.04**
3.00	1.25	0.07	0.00
4.00	1.25	0.07	0.00
5.00	1.25	0.07	0.00
6.00	1.25	0.07	0.00
7.00	1.25	0.07	0.00
8.00	1.25	0.07	0.00
9.00	1.25	0.07	0.00
10.00	1.25	0.07	0.00
11.00	1.25	0.07	0.00
12.00	1.25	0.07	0.00
13.00	1.25	0.07	0.00
14.00	1.25	0.07	0.00
15.00	1.25	0.07	0.00
16.00	1.25	0.07	0.00
17.00	1.25	0.07	0.00
18.00	1.25	0.07	0.00
19.00	1.25	0.07	0.00
20.00	1.25	0.07	0.00
21.00	1.25	0.07	0.00
22.00	1.25	0.07	0.00
23.00	1.25	0.07	0.00
24.00	1.25	0.07	0.00
25.00	1.25	0.07	0.00
26.00	1.25	0.07	0.00
27.00	1.25	0.07	0.00
28.00	1.25	0.07	0.00
29.00	1.25	0.07	0.00
30.00	1.25	0.07	0.00
31.00	1.25	0.07	0.00
32.00	1.25	0.07	0.00
33.00	1.25	0.07	0.00
34.00	1.25	0.07	0.00
35.00	1.25	0.07	0.00
36.00	1.25	0.07	0.00
37.00	1.25	0.07	0.00
38.00	1.25	0.07	0.00
39.00	1.25	0.07	0.00
40.00	1.25	0.07	0.00
41.00	1.25	0.07	0.00
42.00	1.25	0.07	0.00
43.00	1.25	0.07	0.00
44.00	1.25	0.07	0.00
45.00	1.25	0.07	0.00
46.00	1.25	0.07	0.00
47.00	1.25	0.07	0.00
48.00	1.25	0.07	0.00
49.00	1.25	0.07	0.00
50.00	1.25	0.07	0.00
51.00	1.25	0.07	0.00
52.00	1.25	0.07	0.00
53.00	1.25	0.07	0.00
54.00	1.25	0.07	0.00
55.00	1.25	0.07	0.00
56.00	1.25	0.07	0.00
57.00	1.25	0.07	0.00
58.00	1.25	0.07	0.00
59.00	1.25	0.07	0.00
60.00	1.25	0.07	0.00
61.00	1.25	0.07	0.00
62.00	1.25	0.07	0.00
63.00	1.25	0.07	0.00
64.00	1.25	0.07	0.00
65.00	1.25	0.07	0.00
66.00	1.25	0.07	0.00
67.00	1.25	0.07	0.00
68.00	1.25	0.07	0.00
69.00	1.25	0.07	0.00
70.00	1.25	0.07	0.00
71.00	1.25	0.07	0.00
72.00	1.25	0.07	0.00

Summary for Subcatchment 26S: DA 1 Und - Perv

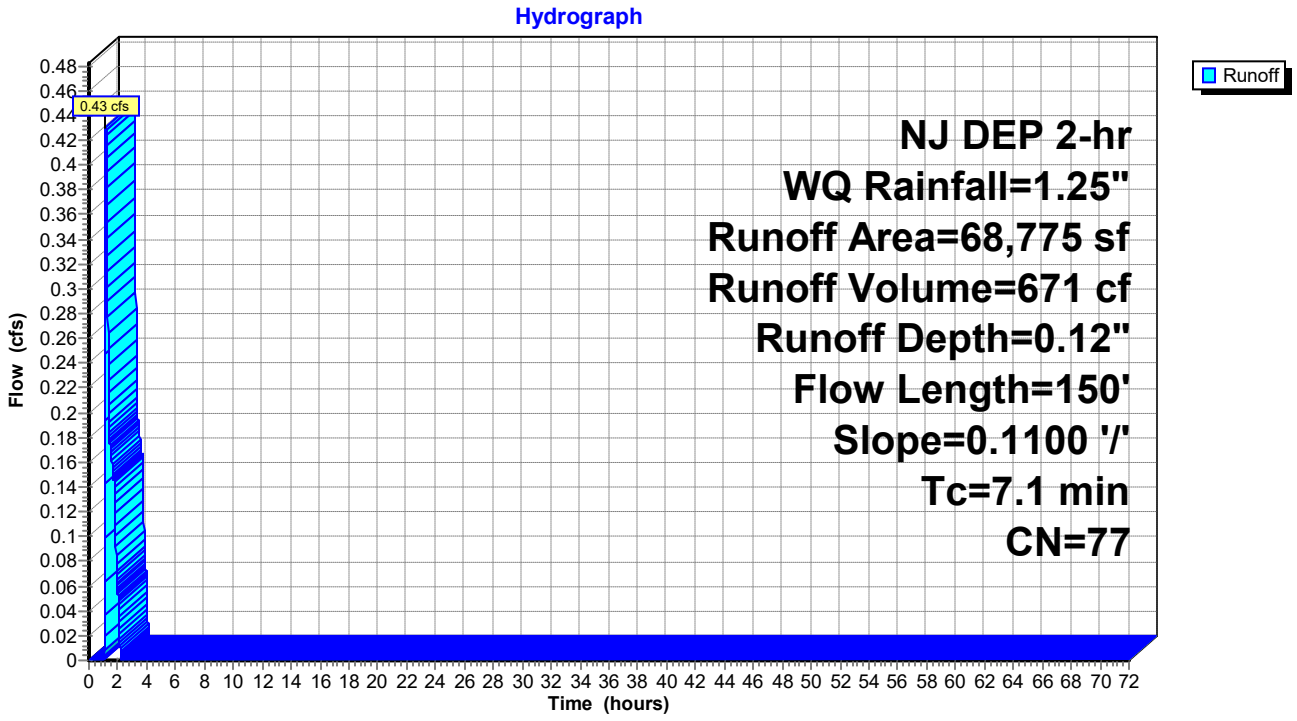
Runoff = 0.43 cfs @ 1.17 hrs, Volume= 671 cf, Depth= 0.12"
Routed to Link 25L : POA 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
34,475	80	>75% Grass cover, Good, HSG D
34,300	74	>75% Grass cover, Good, HSG C
68,775	77	Weighted Average
68,775		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	50	0.1100	5.34		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.1	150	Total			

Subcatchment 26S: DA 1 Und - Perv



Hydrograph for Subcatchment 26S: DA 1 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.63	0.00	**0.00**
2.00	**1.25**	**0.12**	**0.05**
3.00	1.25	0.12	0.00
4.00	1.25	0.12	0.00
5.00	1.25	0.12	0.00
6.00	1.25	0.12	0.00
7.00	1.25	0.12	0.00
8.00	1.25	0.12	0.00
9.00	1.25	0.12	0.00
10.00	1.25	0.12	0.00
11.00	1.25	0.12	0.00
12.00	1.25	0.12	0.00
13.00	1.25	0.12	0.00
14.00	1.25	0.12	0.00
15.00	1.25	0.12	0.00
16.00	1.25	0.12	0.00
17.00	1.25	0.12	0.00
18.00	1.25	0.12	0.00
19.00	1.25	0.12	0.00
20.00	1.25	0.12	0.00
21.00	1.25	0.12	0.00
22.00	1.25	0.12	0.00
23.00	1.25	0.12	0.00
24.00	1.25	0.12	0.00
25.00	1.25	0.12	0.00
26.00	1.25	0.12	0.00
27.00	1.25	0.12	0.00
28.00	1.25	0.12	0.00
29.00	1.25	0.12	0.00
30.00	1.25	0.12	0.00
31.00	1.25	0.12	0.00
32.00	1.25	0.12	0.00
33.00	1.25	0.12	0.00
34.00	1.25	0.12	0.00
35.00	1.25	0.12	0.00
36.00	1.25	0.12	0.00
37.00	1.25	0.12	0.00
38.00	1.25	0.12	0.00
39.00	1.25	0.12	0.00
40.00	1.25	0.12	0.00
41.00	1.25	0.12	0.00
42.00	1.25	0.12	0.00
43.00	1.25	0.12	0.00
44.00	1.25	0.12	0.00
45.00	1.25	0.12	0.00
46.00	1.25	0.12	0.00
47.00	1.25	0.12	0.00
48.00	1.25	0.12	0.00
49.00	1.25	0.12	0.00
50.00	1.25	0.12	0.00
51.00	1.25	0.12	0.00
52.00	1.25	0.12	0.00
53.00	1.25	0.12	0.00
54.00	1.25	0.12	0.00
55.00	1.25	0.12	0.00
56.00	1.25	0.12	0.00
57.00	1.25	0.12	0.00
58.00	1.25	0.12	0.00
59.00	1.25	0.12	0.00
60.00	1.25	0.12	0.00
61.00	1.25	0.12	0.00
62.00	1.25	0.12	0.00
63.00	1.25	0.12	0.00
64.00	1.25	0.12	0.00
65.00	1.25	0.12	0.00
66.00	1.25	0.12	0.00
67.00	1.25	0.12	0.00
68.00	1.25	0.12	0.00
69.00	1.25	0.12	0.00
70.00	1.25	0.12	0.00
71.00	1.25	0.12	0.00
72.00	1.25	0.12	0.00

Summary for Subcatchment 27S: Basin 5 - Perv

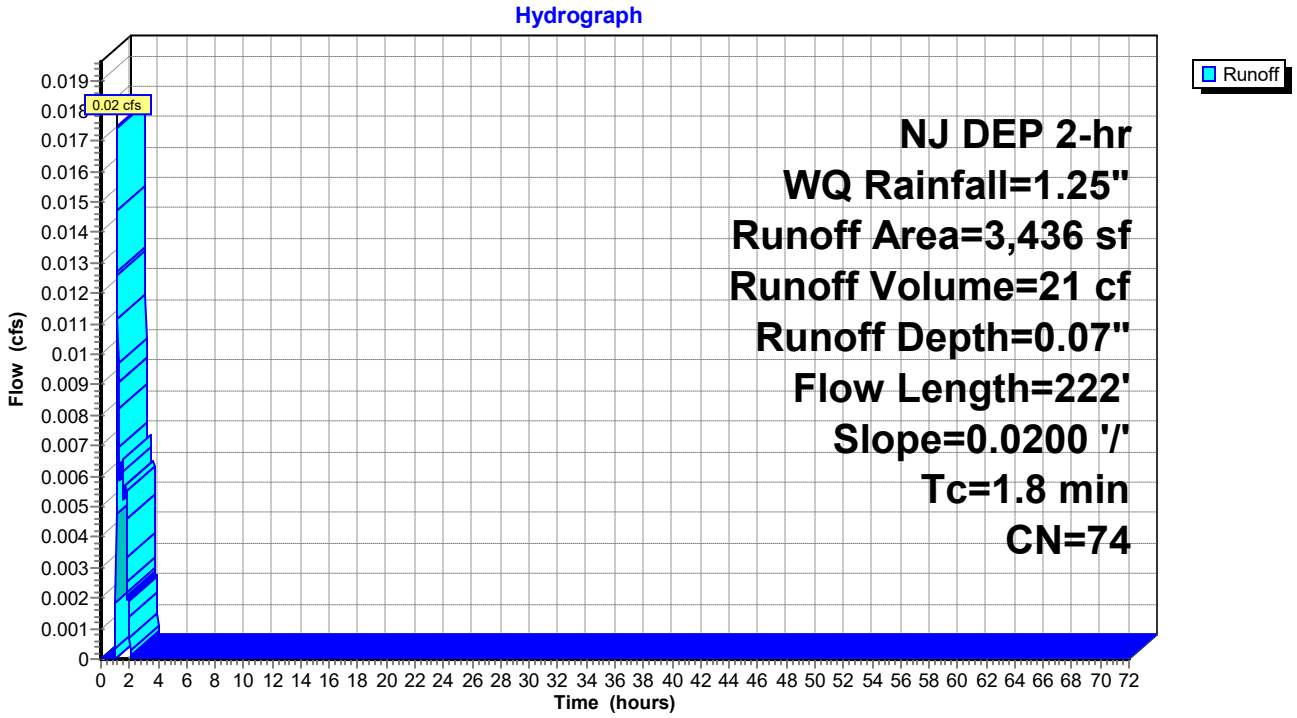
Runoff = 0.02 cfs @ 1.10 hrs, Volume= 21 cf, Depth= 0.07"
Routed to Pond 18P : Basin 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
3,436	74	>75% Grass cover, Good, HSG C
3,436		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.19		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
1.2	182		2.50		**Direct Entry, Pipe Flow (B-C)**
1.8	222	Total			

Subcatchment 27S: Basin 5 - Perv



Hydrograph for Subcatchment 27S: Basin 5 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.63	0.00	**0.00**
2.00	**1.25**	**0.07**	**0.00**
3.00	1.25	0.07	0.00
4.00	1.25	0.07	0.00
5.00	1.25	0.07	0.00
6.00	1.25	0.07	0.00
7.00	1.25	0.07	0.00
8.00	1.25	0.07	0.00
9.00	1.25	0.07	0.00
10.00	1.25	0.07	0.00
11.00	1.25	0.07	0.00
12.00	1.25	0.07	0.00
13.00	1.25	0.07	0.00
14.00	1.25	0.07	0.00
15.00	1.25	0.07	0.00
16.00	1.25	0.07	0.00
17.00	1.25	0.07	0.00
18.00	1.25	0.07	0.00
19.00	1.25	0.07	0.00
20.00	1.25	0.07	0.00
21.00	1.25	0.07	0.00
22.00	1.25	0.07	0.00
23.00	1.25	0.07	0.00
24.00	1.25	0.07	0.00
25.00	1.25	0.07	0.00
26.00	1.25	0.07	0.00
27.00	1.25	0.07	0.00
28.00	1.25	0.07	0.00
29.00	1.25	0.07	0.00
30.00	1.25	0.07	0.00
31.00	1.25	0.07	0.00
32.00	1.25	0.07	0.00
33.00	1.25	0.07	0.00
34.00	1.25	0.07	0.00
35.00	1.25	0.07	0.00
36.00	1.25	0.07	0.00
37.00	1.25	0.07	0.00
38.00	1.25	0.07	0.00
39.00	1.25	0.07	0.00
40.00	1.25	0.07	0.00
41.00	1.25	0.07	0.00
42.00	1.25	0.07	0.00
43.00	1.25	0.07	0.00
44.00	1.25	0.07	0.00
45.00	1.25	0.07	0.00
46.00	1.25	0.07	0.00
47.00	1.25	0.07	0.00
48.00	1.25	0.07	0.00
49.00	1.25	0.07	0.00
50.00	1.25	0.07	0.00
51.00	1.25	0.07	0.00
52.00	1.25	0.07	0.00
53.00	1.25	0.07	0.00
54.00	1.25	0.07	0.00
55.00	1.25	0.07	0.00
56.00	1.25	0.07	0.00
57.00	1.25	0.07	0.00
58.00	1.25	0.07	0.00
59.00	1.25	0.07	0.00
60.00	1.25	0.07	0.00
61.00	1.25	0.07	0.00
62.00	1.25	0.07	0.00
63.00	1.25	0.07	0.00
64.00	1.25	0.07	0.00
65.00	1.25	0.07	0.00
66.00	1.25	0.07	0.00
67.00	1.25	0.07	0.00
68.00	1.25	0.07	0.00
69.00	1.25	0.07	0.00
70.00	1.25	0.07	0.00
71.00	1.25	0.07	0.00
72.00	1.25	0.07	0.00

Summary for Pond 16P: Basin 1

Inflow Area = 378,971 sf, 51.29% Impervious, Inflow Depth = 0.14" for WQ event
Inflow = 2.36 cfs @ 1.22 hrs, Volume= 4,340 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 25L : POA 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 543.63' @ 2.80 hrs Surf.Area= 32,901 sf Storage= 4,340 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

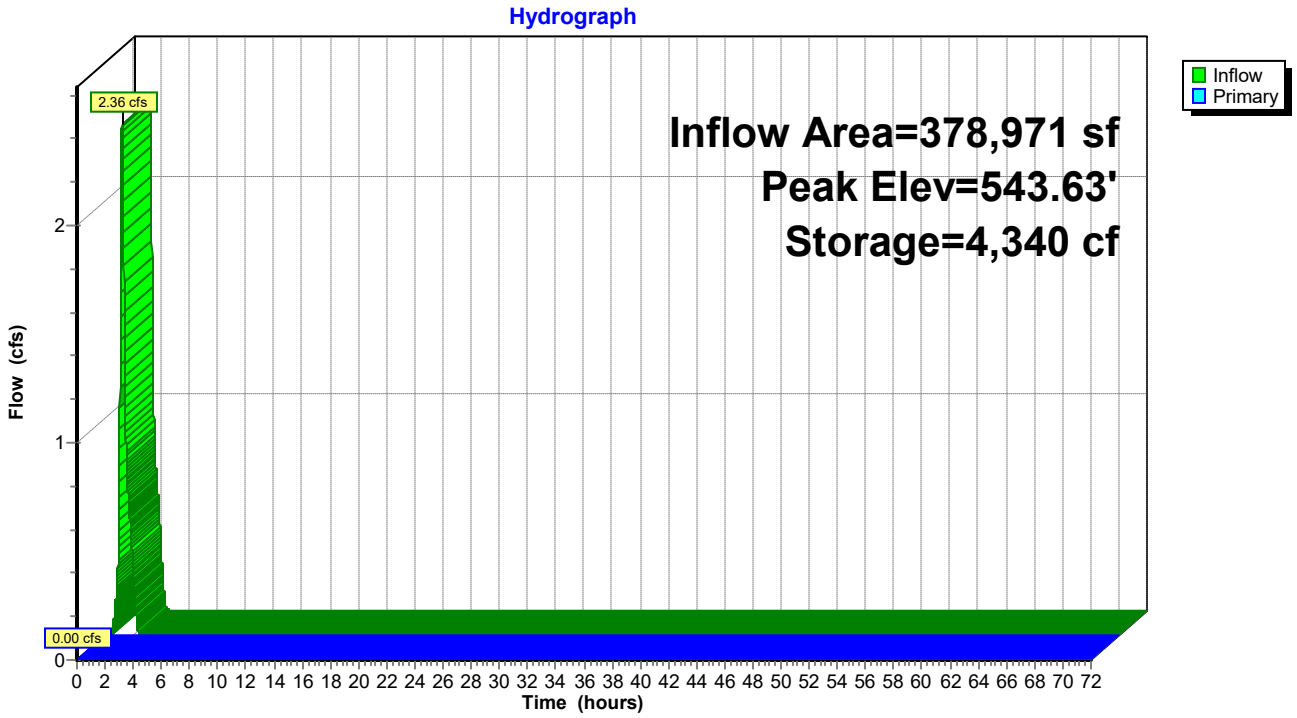
Volume	Invert	Avail.Storage	Storage Description
#1	543.50'	126,759 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
543.50	32,670	0	0
544.00	33,541	16,553	16,553
545.00	35,719	34,630	51,183
546.00	37,897	36,808	87,991
547.00	39,640	38,769	126,759

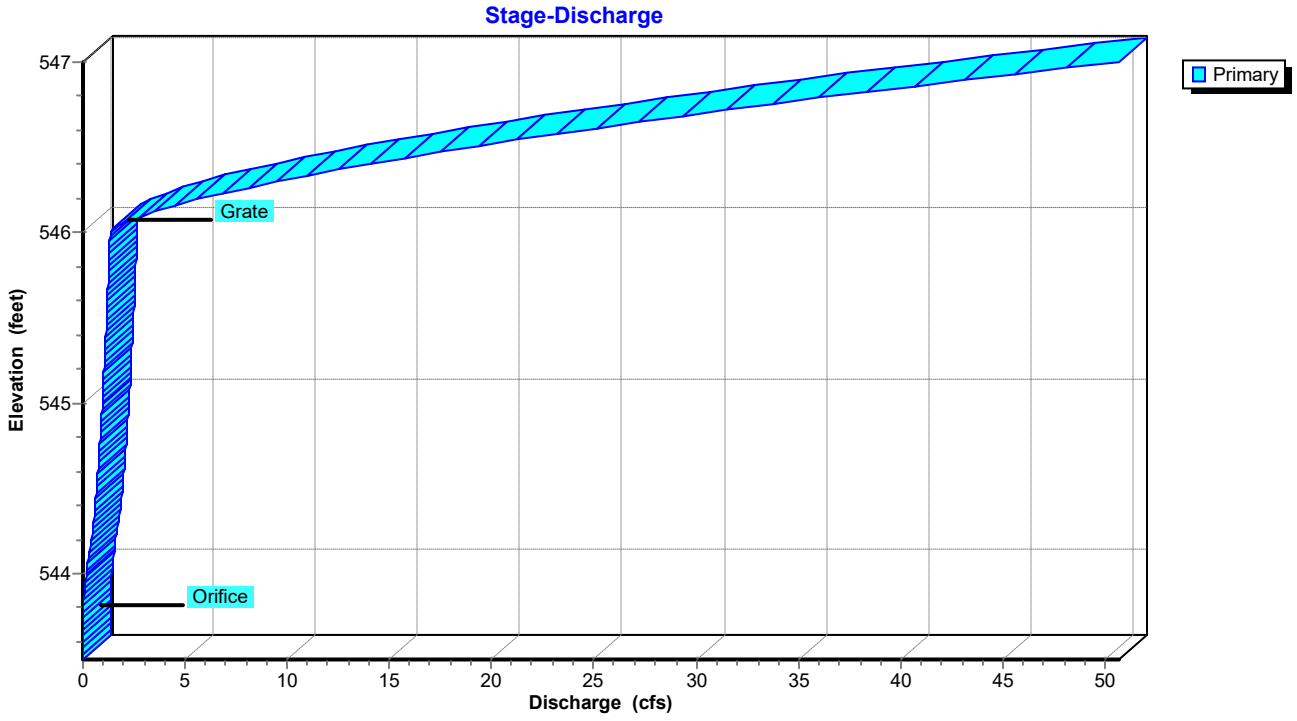
Device	Routing	Invert	Outlet Devices
#1	Primary	546.00'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	543.75'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=543.50' (Free Discharge)
1=Grate (Controls 0.00 cfs)
2=Orifice (Controls 0.00 cfs)

Pond 16P: Basin 1



Pond 16P: Basin 1



Hydrograph for Pond 16P: Basin 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	**0.00**	0	543.50	**0.00**
2.00	**0.27**	**4,173**	**543.63**	0.00
4.00	0.00	**4,340**	**543.63**	0.00
6.00	0.00	4,340	543.63	0.00
8.00	0.00	4,340	543.63	0.00
10.00	0.00	4,340	543.63	0.00
12.00	0.00	4,340	543.63	0.00
14.00	0.00	4,340	543.63	0.00
16.00	0.00	4,340	543.63	0.00
18.00	0.00	4,340	543.63	0.00
20.00	0.00	4,340	543.63	0.00
22.00	0.00	4,340	543.63	0.00
24.00	0.00	4,340	543.63	0.00
26.00	0.00	4,340	543.63	0.00
28.00	0.00	4,340	543.63	0.00
30.00	0.00	4,340	543.63	0.00
32.00	0.00	4,340	543.63	0.00
34.00	0.00	4,340	543.63	0.00
36.00	0.00	4,340	543.63	0.00
38.00	0.00	4,340	543.63	0.00
40.00	0.00	4,340	543.63	0.00
42.00	0.00	4,340	543.63	0.00
44.00	0.00	4,340	543.63	0.00
46.00	0.00	4,340	543.63	0.00
48.00	0.00	4,340	543.63	0.00
50.00	0.00	4,340	543.63	0.00
52.00	0.00	4,340	543.63	0.00
54.00	0.00	4,340	543.63	0.00
56.00	0.00	4,340	543.63	0.00
58.00	0.00	4,340	543.63	0.00
60.00	0.00	4,340	543.63	0.00
62.00	0.00	4,340	543.63	0.00
64.00	0.00	4,340	543.63	0.00
66.00	0.00	4,340	543.63	0.00
68.00	0.00	4,340	543.63	0.00
70.00	0.00	4,340	543.63	0.00
72.00	0.00	4,340	543.63	0.00

Stage-Discharge for Pond 16P: Basin 1

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
543.50	0.00	544.52	0.68	545.54	1.17	546.56	22.07
543.52	0.00	544.54	0.69	545.56	1.18	546.58	23.18
543.54	0.00	544.56	0.71	545.58	1.19	546.60	24.32
543.56	0.00	544.58	0.72	545.60	1.20	546.62	25.48
543.58	0.00	544.60	0.73	545.62	1.20	546.64	26.65
543.60	0.00	544.62	0.74	545.64	1.21	546.66	27.84
543.62	0.00	544.64	0.76	545.66	1.22	546.68	29.05
543.64	0.00	544.66	0.77	545.68	1.23	546.70	30.28
543.66	0.00	544.68	0.78	545.70	1.23	546.72	31.53
543.68	0.00	544.70	0.79	545.72	1.24	546.74	32.79
543.70	0.00	544.72	0.80	545.74	1.25	546.76	34.07
543.72	0.00	544.74	0.81	545.76	1.25	546.78	35.37
543.74	0.00	544.76	0.82	545.78	1.26	546.80	36.68
543.76	0.00	544.78	0.83	545.80	1.27	546.82	38.01
543.78	0.00	544.80	0.85	545.82	1.28	546.84	39.36
543.80	0.01	544.82	0.86	545.84	1.28	546.86	40.72
543.82	0.02	544.84	0.87	545.86	1.29	546.88	42.10
543.84	0.02	544.86	0.88	545.88	1.30	546.90	43.49
543.86	0.04	544.88	0.89	545.90	1.30	546.92	44.90
543.88	0.05	544.90	0.90	545.92	1.31	546.94	46.32
543.90	0.07	544.92	0.91	545.94	1.32	546.96	47.76
543.92	0.08	544.94	0.92	545.96	1.32	546.98	49.22
543.94	0.10	544.96	0.93	545.98	1.33	547.00	**50.69**
543.96	0.12	544.98	0.94	546.00	1.34		
543.98	0.14	545.00	0.95	546.02	1.48		
544.00	0.17	545.02	0.95	546.04	1.74		
544.02	0.19	545.04	0.96	546.06	2.08		
544.04	0.22	545.06	0.97	546.08	2.47		
544.06	0.24	545.08	0.98	546.10	2.92		
544.08	0.27	545.10	0.99	546.12	3.42		
544.10	0.30	545.12	1.00	546.14	3.95		
544.12	0.32	545.14	1.01	546.16	4.53		
544.14	0.35	545.16	1.02	546.18	5.14		
544.16	0.38	545.18	1.03	546.20	5.79		
544.18	0.40	545.20	1.04	546.22	6.47		
544.20	0.43	545.22	1.04	546.24	7.18		
544.22	0.45	545.24	1.05	546.26	7.92		
544.24	0.47	545.26	1.06	546.28	8.69		
544.26	0.48	545.28	1.07	546.30	9.49		
544.28	0.50	545.30	1.08	546.32	10.32		
544.30	0.52	545.32	1.09	546.34	11.17		
544.32	0.53	545.34	1.09	546.36	12.05		
544.34	0.55	545.36	1.10	546.38	12.95		
544.36	0.57	545.38	1.11	546.40	13.87		
544.38	0.58	545.40	1.12	546.42	14.82		
544.40	0.60	545.42	1.13	546.44	15.79		
544.42	0.61	545.44	1.13	546.46	16.79		
544.44	0.63	545.46	1.14	546.48	17.80		
544.46	0.64	545.48	1.15	546.50	18.84		
544.48	0.66	545.50	1.16	546.52	19.89		
544.50	0.67	545.52	1.17	546.54	20.97		

Stage-Area-Storage for Pond 16P: Basin 1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
543.50	32,670	0
543.55	32,757	1,636
543.60	32,844	3,276
543.65	32,931	4,920
543.70	33,018	6,569
543.75	33,106	8,222
543.80	33,193	9,879
543.85	33,280	11,541
543.90	33,367	13,207
543.95	33,454	14,878
544.00	33,541	16,553
544.05	33,650	18,233
544.10	33,759	19,918
544.15	33,868	21,608
544.20	33,977	23,305
544.25	34,086	25,006
544.30	34,194	26,713
544.35	34,303	28,426
544.40	34,412	30,143
544.45	34,521	31,867
544.50	34,630	33,596
544.55	34,739	35,330
544.60	34,848	37,069
544.65	34,957	38,815
544.70	35,066	40,565
544.75	35,175	42,321
544.80	35,283	44,083
544.85	35,392	45,849
544.90	35,501	47,622
544.95	35,610	49,400
545.00	35,719	51,183
545.05	35,828	52,971
545.10	35,937	54,766
545.15	36,046	56,565
545.20	36,155	58,370
545.25	36,264	60,181
545.30	36,372	61,996
545.35	36,481	63,818
545.40	36,590	65,645
545.45	36,699	67,477
545.50	36,808	69,315
545.55	36,917	71,158
545.60	37,026	73,006
545.65	37,135	74,860
545.70	37,244	76,720
545.75	37,353	78,585
545.80	37,461	80,455
545.85	37,570	82,331
545.90	37,679	84,212
545.95	37,788	86,099
546.00	37,897	87,991
546.05	37,984	89,888
546.10	38,071	91,789
546.15	38,158	93,695
546.20	38,246	95,605
546.25	38,333	97,519
546.30	38,420	99,438
546.35	38,507	101,361
546.40	38,594	103,289
546.45	38,681	105,221
546.50	38,769	107,157
546.55	38,856	109,098
546.60	38,943	111,043
546.65	39,030	112,992
546.70	39,117	114,946
546.75	39,204	116,904
546.80	39,291	118,866
546.85	39,379	120,833
546.90	39,466	122,804
546.95	39,553	124,779
547.00	**39,640**	**126,759**

Summary for Pond 18P: Basin 5

Inflow Area = 46,603 sf, 92.63% Impervious, Inflow Depth = 0.96" for WQ event
Inflow = 3.06 cfs @ 1.08 hrs, Volume= 3,743 cf
Outflow = 1.37 cfs @ 0.97 hrs, Volume= 3,743 cf, Atten= 55%, Lag= 0.0 min
Discarded = 1.37 cfs @ 0.97 hrs, Volume= 3,743 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 579.19' @ 1.13 hrs Surf.Area= 14,810 sf Storage= 1,135 cf

Plug-Flow detention time= 7.5 min calculated for 3,742 cf (100% of inflow)
Center-of-Mass det. time= 7.5 min (74.0 - 66.5)

Volume	Invert	Avail.Storage	Storage Description
#1	579.00'	31,397 cf	**Custom Stage Data (Prismatic)** Listed below 78,493 cf Overall x 40.0% Voids

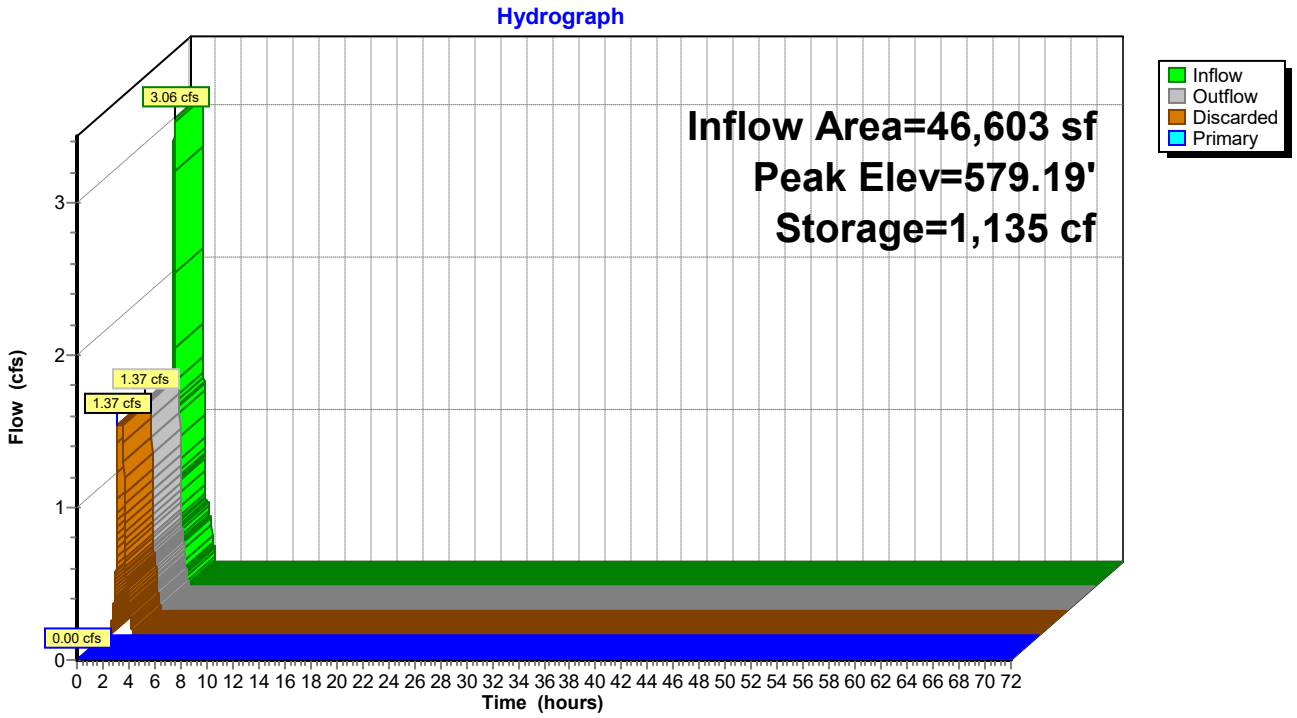
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
579.00	14,810	0	0
580.00	14,810	14,810	14,810
581.00	14,810	14,810	29,620
582.00	14,810	14,810	44,430
583.00	14,810	14,810	59,240
584.00	14,810	14,810	74,050
584.30	14,810	4,443	78,493

Device	Routing	Invert	Outlet Devices
#1	Primary	579.25'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	579.00'	**4.000 in/hr Exfiltration over Surface area**

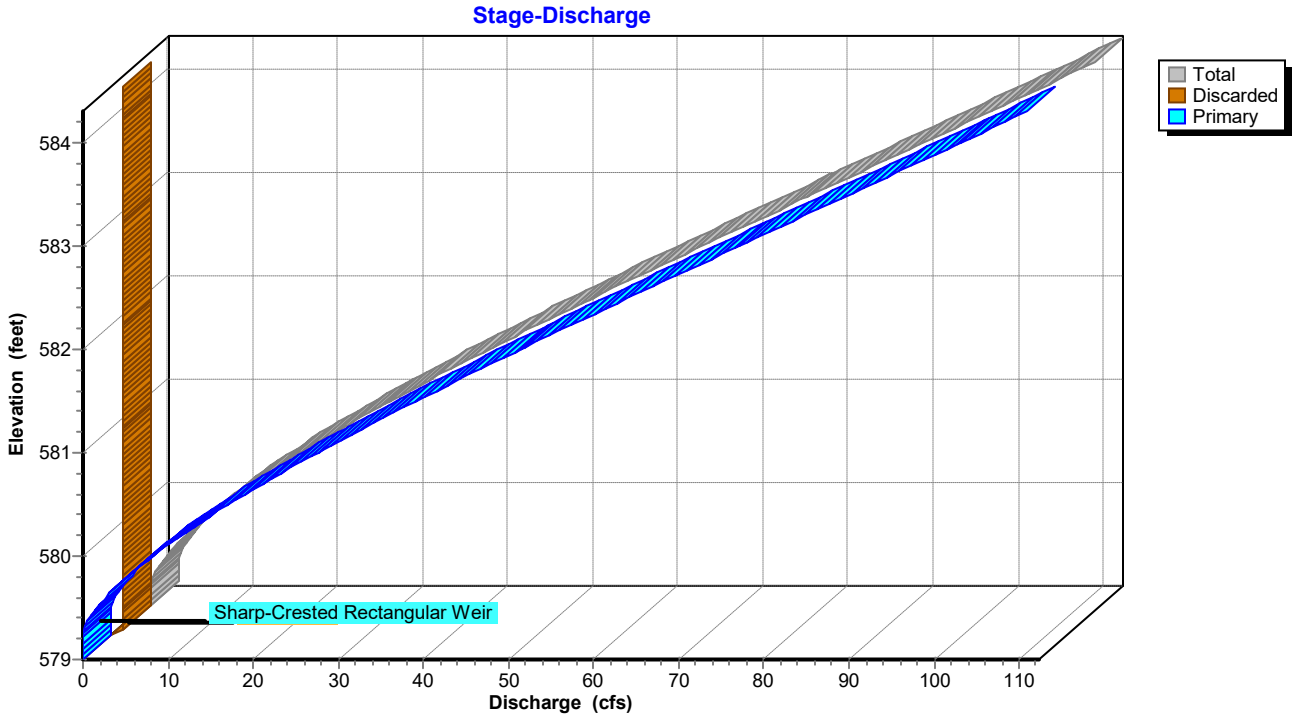
Discarded OutFlow Max=1.37 cfs @ 0.97 hrs HW=579.06' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.37 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=579.00' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 18P: Basin 5



Pond 18P: Basin 5



Hydrograph for Pond 18P: Basin 5

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**579.00**	**0.00**	**0.00**	**0.00**
2.00	**0.10**	**24**	**579.00**	**0.11**	**0.11**	0.00
4.00	0.00	0	579.00	0.00	0.00	0.00
6.00	0.00	0	579.00	0.00	0.00	0.00
8.00	0.00	0	579.00	0.00	0.00	0.00
10.00	0.00	0	579.00	0.00	0.00	0.00
12.00	0.00	0	579.00	0.00	0.00	0.00
14.00	0.00	0	579.00	0.00	0.00	0.00
16.00	0.00	0	579.00	0.00	0.00	0.00
18.00	0.00	0	579.00	0.00	0.00	0.00
20.00	0.00	0	579.00	0.00	0.00	0.00
22.00	0.00	0	579.00	0.00	0.00	0.00
24.00	0.00	0	579.00	0.00	0.00	0.00
26.00	0.00	0	579.00	0.00	0.00	0.00
28.00	0.00	0	579.00	0.00	0.00	0.00
30.00	0.00	0	579.00	0.00	0.00	0.00
32.00	0.00	0	579.00	0.00	0.00	0.00
34.00	0.00	0	579.00	0.00	0.00	0.00
36.00	0.00	0	579.00	0.00	0.00	0.00
38.00	0.00	0	579.00	0.00	0.00	0.00
40.00	0.00	0	579.00	0.00	0.00	0.00
42.00	0.00	0	579.00	0.00	0.00	0.00
44.00	0.00	0	579.00	0.00	0.00	0.00
46.00	0.00	0	579.00	0.00	0.00	0.00
48.00	0.00	0	579.00	0.00	0.00	0.00
50.00	0.00	0	579.00	0.00	0.00	0.00
52.00	0.00	0	579.00	0.00	0.00	0.00
54.00	0.00	0	579.00	0.00	0.00	0.00
56.00	0.00	0	579.00	0.00	0.00	0.00
58.00	0.00	0	579.00	0.00	0.00	0.00
60.00	0.00	0	579.00	0.00	0.00	0.00
62.00	0.00	0	579.00	0.00	0.00	0.00
64.00	0.00	0	579.00	0.00	0.00	0.00
66.00	0.00	0	579.00	0.00	0.00	0.00
68.00	0.00	0	579.00	0.00	0.00	0.00
70.00	0.00	0	579.00	0.00	0.00	0.00
72.00	0.00	0	579.00	0.00	0.00	0.00

Stage-Discharge for Pond 18P: Basin 5

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
579.00	0.00	**0.00**	0.00
579.10	1.37	**1.37**	0.00
579.20	1.37	1.37	0.00
579.30	1.52	1.37	0.15
579.40	2.13	1.37	0.75
579.50	2.99	1.37	1.61
579.60	4.03	1.37	2.66
579.70	5.23	1.37	3.86
579.80	6.56	1.37	5.19
579.90	8.00	1.37	6.63
580.00	9.55	1.37	8.18
580.10	11.19	1.37	9.81
580.20	12.91	1.37	11.54
580.30	14.71	1.37	13.33
580.40	16.57	1.37	15.20
580.50	18.51	1.37	17.14
580.60	20.50	1.37	19.13
580.70	22.55	1.37	21.18
580.80	24.66	1.37	23.28
580.90	26.81	1.37	25.44
581.00	29.00	1.37	27.63
581.10	31.24	1.37	29.87
581.20	33.52	1.37	32.14
581.30	35.83	1.37	34.46
581.40	38.17	1.37	36.80
581.50	40.55	1.37	39.18
581.60	42.96	1.37	41.58
581.70	45.39	1.37	44.02
581.80	47.84	1.37	46.47
581.90	50.32	1.37	48.95
582.00	52.82	1.37	51.45
582.10	55.34	1.37	53.96
582.20	57.87	1.37	56.50
582.30	60.42	1.37	59.05
582.40	62.98	1.37	61.61
582.50	65.55	1.37	64.18
582.60	68.14	1.37	66.77
582.70	70.73	1.37	69.36
582.80	73.33	1.37	71.96
582.90	75.94	1.37	74.56
583.00	78.55	1.37	77.18
583.10	81.16	1.37	79.79
583.20	83.78	1.37	82.40
583.30	86.39	1.37	85.02
583.40	89.01	1.37	87.64
583.50	91.62	1.37	90.25
583.60	94.23	1.37	92.86
583.70	96.84	1.37	95.47
583.80	99.44	1.37	98.07
583.90	102.03	1.37	100.66
584.00	104.62	1.37	103.25
584.10	107.20	1.37	105.83
584.20	109.77	1.37	108.40
584.30	**112.33**	1.37	**110.96**

Stage-Area-Storage for Pond 18P: Basin 5

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
579.00	**14,810**	0
579.10	14,810	592
579.20	14,810	1,185
579.30	14,810	1,777
579.40	14,810	2,370
579.50	14,810	2,962
579.60	14,810	3,554
579.70	14,810	4,147
579.80	14,810	4,739
579.90	14,810	5,332
580.00	14,810	5,924
580.10	14,810	6,516
580.20	14,810	7,109
580.30	14,810	7,701
580.40	14,810	8,294
580.50	14,810	8,886
580.60	14,810	9,478
580.70	14,810	10,071
580.80	14,810	10,663
580.90	14,810	11,256
581.00	14,810	11,848
581.10	14,810	12,440
581.20	14,810	13,033
581.30	14,810	13,625
581.40	14,810	14,218
581.50	14,810	14,810
581.60	14,810	15,402
581.70	14,810	15,995
581.80	14,810	16,587
581.90	14,810	17,180
582.00	14,810	17,772
582.10	14,810	18,364
582.20	14,810	18,957
582.30	14,810	19,549
582.40	14,810	20,142
582.50	14,810	20,734
582.60	14,810	21,326
582.70	14,810	21,919
582.80	14,810	22,511
582.90	14,810	23,104
583.00	14,810	23,696
583.10	14,810	24,288
583.20	14,810	24,881
583.30	14,810	25,473
583.40	14,810	26,066
583.50	14,810	26,658
583.60	14,810	27,250
583.70	14,810	27,843
583.80	14,810	28,435
583.90	14,810	29,028
584.00	14,810	29,620
584.10	14,810	30,212
584.20	14,810	30,805
584.30	14,810	**31,397**

Summary for Pond 24P: Basin 6

Inflow Area = 180,292 sf, 63.14% Impervious, Inflow Depth = 0.68" for WQ event
Inflow = 8.11 cfs @ 1.09 hrs, Volume= 10,222 cf
Outflow = 8.09 cfs @ 1.10 hrs, Volume= 10,222 cf, Atten= 0%, Lag= 0.3 min
Discarded = 8.09 cfs @ 1.10 hrs, Volume= 10,222 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 16P : Basin 1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 600.01' @ 1.10 hrs Surf.Area= 35,719 sf Storage= 199 cf

Plug-Flow detention time= 0.4 min calculated for 10,221 cf (100% of inflow)
Center-of-Mass det. time= 0.4 min (69.2 - 68.8)

Volume	Invert	Avail.Storage	Storage Description
#1	600.00'	20,288 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 50,721 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
600.00	35,719	0	0
601.00	35,719	35,719	35,719
601.42	35,719	15,002	50,721

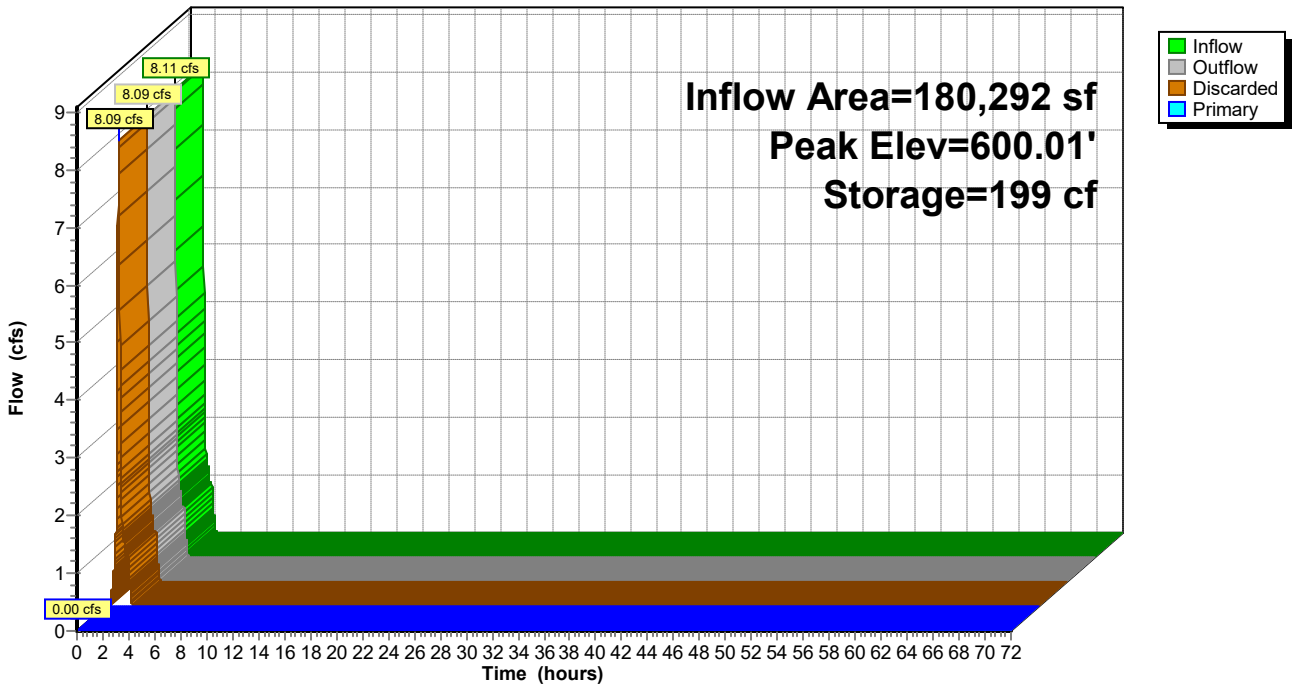
Device	Routing	Invert	Outlet Devices
#1	Primary	600.02'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	600.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=8.27 cfs @ 1.10 hrs HW=600.01' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 8.27 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=600.00' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

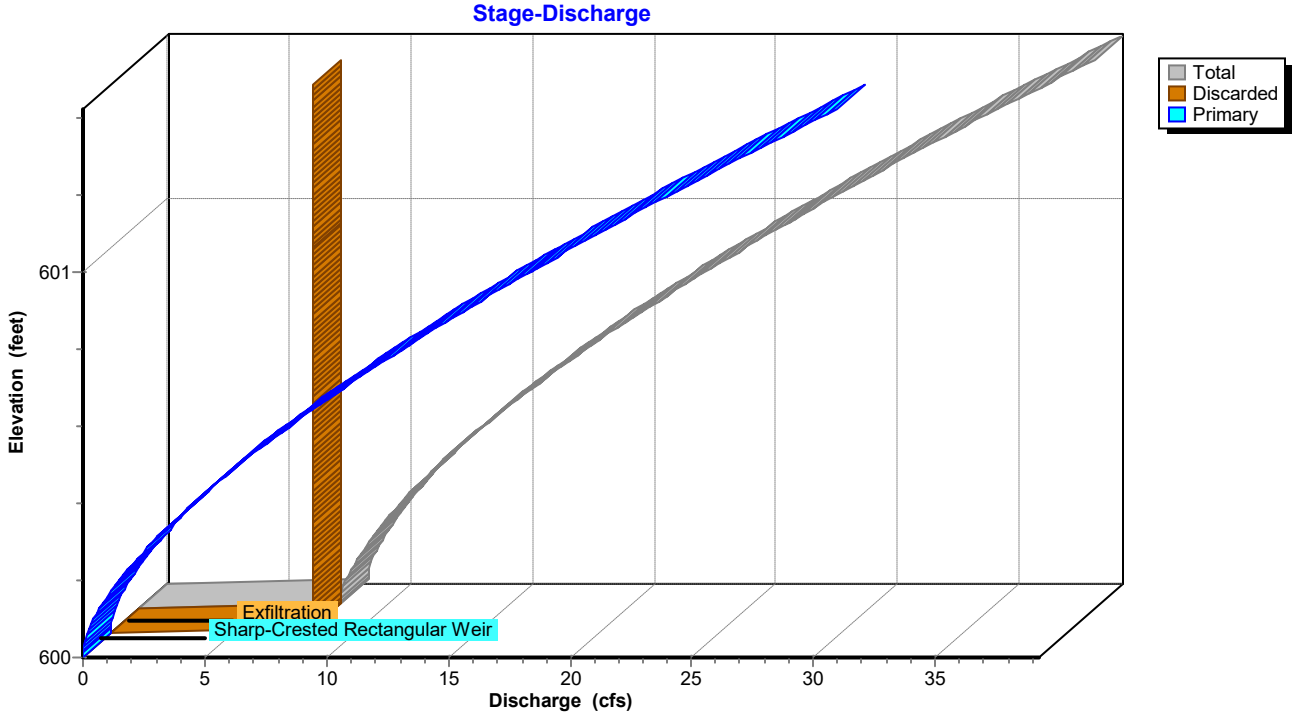
Pond 24P: Basin 6

Hydrograph



Pond 24P: Basin 6

Stage-Discharge



Hydrograph for Pond 24P: Basin 6

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**600.00**	**0.00**	**0.00**	**0.00**
2.00	**0.30**	**7**	**600.00**	**0.30**	**0.30**	0.00
4.00	0.00	0	600.00	0.00	0.00	0.00
6.00	0.00	0	600.00	0.00	0.00	0.00
8.00	0.00	0	600.00	0.00	0.00	0.00
10.00	0.00	0	600.00	0.00	0.00	0.00
12.00	0.00	0	600.00	0.00	0.00	0.00
14.00	0.00	0	600.00	0.00	0.00	0.00
16.00	0.00	0	600.00	0.00	0.00	0.00
18.00	0.00	0	600.00	0.00	0.00	0.00
20.00	0.00	0	600.00	0.00	0.00	0.00
22.00	0.00	0	600.00	0.00	0.00	0.00
24.00	0.00	0	600.00	0.00	0.00	0.00
26.00	0.00	0	600.00	0.00	0.00	0.00
28.00	0.00	0	600.00	0.00	0.00	0.00
30.00	0.00	0	600.00	0.00	0.00	0.00
32.00	0.00	0	600.00	0.00	0.00	0.00
34.00	0.00	0	600.00	0.00	0.00	0.00
36.00	0.00	0	600.00	0.00	0.00	0.00
38.00	0.00	0	600.00	0.00	0.00	0.00
40.00	0.00	0	600.00	0.00	0.00	0.00
42.00	0.00	0	600.00	0.00	0.00	0.00
44.00	0.00	0	600.00	0.00	0.00	0.00
46.00	0.00	0	600.00	0.00	0.00	0.00
48.00	0.00	0	600.00	0.00	0.00	0.00
50.00	0.00	0	600.00	0.00	0.00	0.00
52.00	0.00	0	600.00	0.00	0.00	0.00
54.00	0.00	0	600.00	0.00	0.00	0.00
56.00	0.00	0	600.00	0.00	0.00	0.00
58.00	0.00	0	600.00	0.00	0.00	0.00
60.00	0.00	0	600.00	0.00	0.00	0.00
62.00	0.00	0	600.00	0.00	0.00	0.00
64.00	0.00	0	600.00	0.00	0.00	0.00
66.00	0.00	0	600.00	0.00	0.00	0.00
68.00	0.00	0	600.00	0.00	0.00	0.00
70.00	0.00	0	600.00	0.00	0.00	0.00
72.00	0.00	0	600.00	0.00	0.00	0.00

Stage-Discharge for Pond 24P: Basin 6

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
600.00	0.00	**0.00**	0.00
600.02	8.27	**8.27**	0.00
600.04	8.32	8.27	0.06
600.06	8.43	8.27	0.16
600.08	8.56	8.27	0.29
600.10	8.71	8.27	0.44
600.12	8.89	8.27	0.62
600.14	9.08	8.27	0.81
600.16	9.29	8.27	1.02
600.18	9.52	8.27	1.25
600.20	9.76	8.27	1.49
600.22	10.01	8.27	1.74
600.24	10.28	8.27	2.01
600.26	10.56	8.27	2.29
600.28	10.85	8.27	2.58
600.30	11.15	8.27	2.88
600.32	11.46	8.27	3.19
600.34	11.78	8.27	3.51
600.36	12.11	8.27	3.85
600.38	12.46	8.27	4.19
600.40	12.81	8.27	4.54
600.42	13.17	8.27	4.90
600.44	13.53	8.27	5.27
600.46	13.91	8.27	5.64
600.48	14.30	8.27	6.03
600.50	14.69	8.27	6.42
600.52	15.09	8.27	6.82
600.54	15.50	8.27	7.23
600.56	15.91	8.27	7.65
600.58	16.34	8.27	8.07
600.60	16.77	8.27	8.50
600.62	17.20	8.27	8.94
600.64	17.65	8.27	9.38
600.66	18.10	8.27	9.83
600.68	18.56	8.27	10.29
600.70	19.02	8.27	10.75
600.72	19.49	8.27	11.22
600.74	19.97	8.27	11.70
600.76	20.45	8.27	12.18
600.78	20.94	8.27	12.67
600.80	21.43	8.27	13.16
600.82	21.93	8.27	13.66
600.84	22.44	8.27	14.17
600.86	22.95	8.27	14.68
600.88	23.47	8.27	15.20
600.90	23.99	8.27	15.72
600.92	24.52	8.27	16.25
600.94	25.05	8.27	16.78
600.96	25.59	8.27	17.32
600.98	26.13	8.27	17.86
601.00	26.68	8.27	18.41
601.02	27.23	8.27	18.97
601.04	27.79	8.27	19.52
601.06	28.36	8.27	20.09
601.08	28.92	8.27	20.66
601.10	29.50	8.27	21.23
601.12	30.07	8.27	21.81
601.14	30.66	8.27	22.39
601.16	31.24	8.27	22.97
601.18	31.83	8.27	23.56
601.20	32.43	8.27	24.16
601.22	33.03	8.27	24.76
601.24	33.63	8.27	25.36
601.26	34.24	8.27	25.97
601.28	34.85	8.27	26.58
601.30	35.47	8.27	27.20
601.32	36.09	8.27	27.82
601.34	36.71	8.27	28.45
601.36	37.34	8.27	29.07
601.38	37.98	8.27	29.71
601.40	38.61	8.27	30.34
601.42	**39.25**	8.27	**30.98**

Stage-Area-Storage for Pond 24P: Basin 6

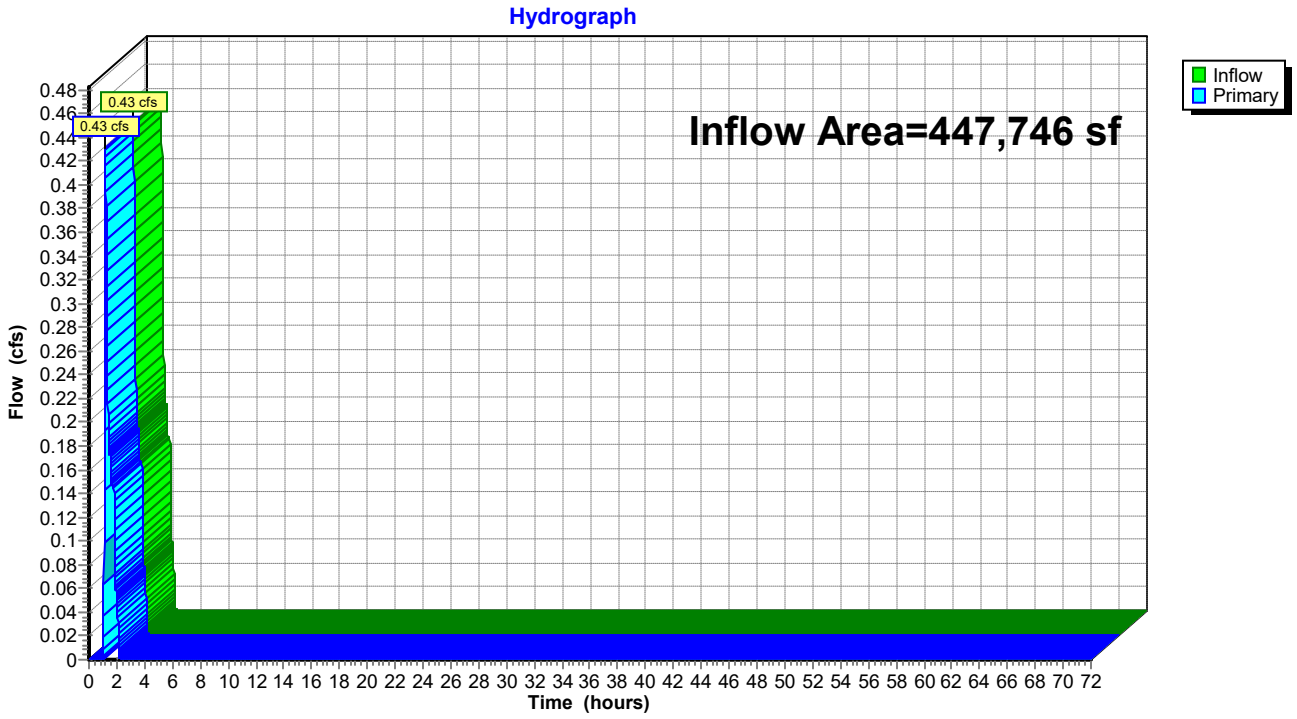
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
600.00	**35,719**	0
600.02	35,719	286
600.04	35,719	572
600.06	35,719	857
600.08	35,719	1,143
600.10	35,719	1,429
600.12	35,719	1,715
600.14	35,719	2,000
600.16	35,719	2,286
600.18	35,719	2,572
600.20	35,719	2,858
600.22	35,719	3,143
600.24	35,719	3,429
600.26	35,719	3,715
600.28	35,719	4,001
600.30	35,719	4,286
600.32	35,719	4,572
600.34	35,719	4,858
600.36	35,719	5,144
600.38	35,719	5,429
600.40	35,719	5,715
600.42	35,719	6,001
600.44	35,719	6,287
600.46	35,719	6,572
600.48	35,719	6,858
600.50	35,719	7,144
600.52	35,719	7,430
600.54	35,719	7,715
600.56	35,719	8,001
600.58	35,719	8,287
600.60	35,719	8,573
600.62	35,719	8,858
600.64	35,719	9,144
600.66	35,719	9,430
600.68	35,719	9,716
600.70	35,719	10,001
600.72	35,719	10,287
600.74	35,719	10,573
600.76	35,719	10,859
600.78	35,719	11,144
600.80	35,719	11,430
600.82	35,719	11,716
600.84	35,719	12,002
600.86	35,719	12,287
600.88	35,719	12,573
600.90	35,719	12,859
600.92	35,719	13,145
600.94	35,719	13,430
600.96	35,719	13,716
600.98	35,719	14,002
601.00	35,719	14,288
601.02	35,719	14,573
601.04	35,719	14,859
601.06	35,719	15,145
601.08	35,719	15,431
601.10	35,719	15,716
601.12	35,719	16,002
601.14	35,719	16,288
601.16	35,719	16,574
601.18	35,719	16,859
601.20	35,719	17,145
601.22	35,719	17,431
601.24	35,719	17,717
601.26	35,719	18,002
601.28	35,719	18,288
601.30	35,719	18,574
601.32	35,719	18,860
601.34	35,719	19,145
601.36	35,719	19,431
601.38	35,719	19,717
601.40	35,719	20,003
601.42	35,719	**20,288**

Summary for Link 25L: POA 1

Inflow Area = 447,746 sf, 43.41% Impervious, Inflow Depth = 0.02" for WQ event
Inflow = 0.43 cfs @ 1.17 hrs, Volume= 671 cf
Primary = 0.43 cfs @ 1.17 hrs, Volume= 671 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 25L: POA 1



Hydrograph for Link 25L: POA 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	51.00	0.00	0.00	0.00
1.00	**0.00**	0.00	**0.00**	52.00	0.00	0.00	0.00
2.00	**0.05**	0.00	**0.05**	53.00	0.00	0.00	0.00
3.00	0.00	0.00	0.00	54.00	0.00	0.00	0.00
4.00	0.00	0.00	0.00	55.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	56.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	57.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00	58.00	0.00	0.00	0.00
8.00	0.00	0.00	0.00	59.00	0.00	0.00	0.00
9.00	0.00	0.00	0.00	60.00	0.00	0.00	0.00
10.00	0.00	0.00	0.00	61.00	0.00	0.00	0.00
11.00	0.00	0.00	0.00	62.00	0.00	0.00	0.00
12.00	0.00	0.00	0.00	63.00	0.00	0.00	0.00
13.00	0.00	0.00	0.00	64.00	0.00	0.00	0.00
14.00	0.00	0.00	0.00	65.00	0.00	0.00	0.00
15.00	0.00	0.00	0.00	66.00	0.00	0.00	0.00
16.00	0.00	0.00	0.00	67.00	0.00	0.00	0.00
17.00	0.00	0.00	0.00	68.00	0.00	0.00	0.00
18.00	0.00	0.00	0.00	69.00	0.00	0.00	0.00
19.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00
20.00	0.00	0.00	0.00	71.00	0.00	0.00	0.00
21.00	0.00	0.00	0.00	72.00	0.00	0.00	0.00
22.00	0.00	0.00	0.00				
23.00	0.00	0.00	0.00				
24.00	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
29.00	0.00	0.00	0.00				
30.00	0.00	0.00	0.00				
31.00	0.00	0.00	0.00				
32.00	0.00	0.00	0.00				
33.00	0.00	0.00	0.00				
34.00	0.00	0.00	0.00				
35.00	0.00	0.00	0.00				
36.00	0.00	0.00	0.00				
37.00	0.00	0.00	0.00				
38.00	0.00	0.00	0.00				
39.00	0.00	0.00	0.00				
40.00	0.00	0.00	0.00				
41.00	0.00	0.00	0.00				
42.00	0.00	0.00	0.00				
43.00	0.00	0.00	0.00				
44.00	0.00	0.00	0.00				
45.00	0.00	0.00	0.00				
46.00	0.00	0.00	0.00				
47.00	0.00	0.00	0.00				
48.00	0.00	0.00	0.00				
49.00	0.00	0.00	0.00				
50.00	0.00	0.00	0.00				

Events for Subcatchment 14S: Basin 1 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	2.15	9,987	3.21
10-Year	5.22	3.29	15,518	4.98
100-Year	**8.66**	**5.47**	**26,222**	**8.42**
WQ	1.25	1.96	3,222	1.03

Events for Subcatchment 15S: Basin 1 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	3.18	13,249	1.39
10-Year	5.22	6.54	26,842	2.81
100-Year	**8.66**	**13.50**	**56,234**	**5.88**
WQ	1.25	0.55	1,118	0.12

Events for Subcatchment 17S: Basin 5 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	3.55	11,535	3.21
10-Year	5.22	5.42	17,925	4.98
100-Year	**8.66**	**9.01**	**30,288**	**8.42**
WQ	1.25	3.05	3,722	1.03

Events for Subcatchment 22S: Basin 6 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	9.17	30,418	3.21
10-Year	5.22	13.99	47,267	4.98
100-Year	**8.66**	**23.28**	**79,870**	**8.42**
WQ	1.25	7.96	9,814	1.03

Events for Subcatchment 23S: Basin 6 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	2.33	6,639	1.20
10-Year	5.22	4.99	14,073	2.54
100-Year	**8.66**	**10.58**	**30,572**	**5.52**
WQ	1.25	0.26	409	0.07

Events for Subcatchment 26S: DA 1 Und - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	2.46	7,944	1.39
10-Year	5.22	5.01	16,094	2.81
100-Year	**8.66**	**10.26**	**33,717**	**5.88**
WQ	1.25	0.43	671	0.12

Events for Subcatchment 27S: Basin 5 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	0.13	343	1.20
10-Year	5.22	0.27	728	2.54
100-Year	**8.66**	**0.57**	**1,581**	**5.52**
WQ	1.25	0.02	21	0.07

Events for Pond 16P: Basin 1

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	5.32	0.19	544.02	17,163
10-Year	13.05	0.60	544.40	30,179
100-Year	**33.46**	**1.18**	**545.56**	**71,431**
WQ	2.36	0.00	543.63	4,340

Events for Pond 18P: Basin 5

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	3.68	1.37	**1.37**	0.00	579.23	1,374
10-Year	5.69	2.43	1.37	1.06	579.44	2,595
100-Year	**9.58**	**6.04**	1.37	**4.67**	**579.76**	**4,513**
WQ	3.06	1.37	1.37	0.00	579.19	1,135

Events for Pond 24P: Basin 6

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	11.49	8.49	**8.27**	0.22	600.07	995
10-Year	18.97	10.90	8.27	2.63	600.28	4,048
100-Year	**33.86**	**19.94**	8.27	**11.67**	**600.74**	**10,554**
WQ	8.11	8.09	8.09	0.00	600.01	199

Events for Link 25L: POA 1

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
2-Year	2.46	2.46	**0.00**
10-Year	5.08	5.08	0.00
100-Year	**10.89**	**10.89**	0.00
WQ	0.43	0.43	0.00

Summary for Subcatchment 19S: Basin 3 - Imp

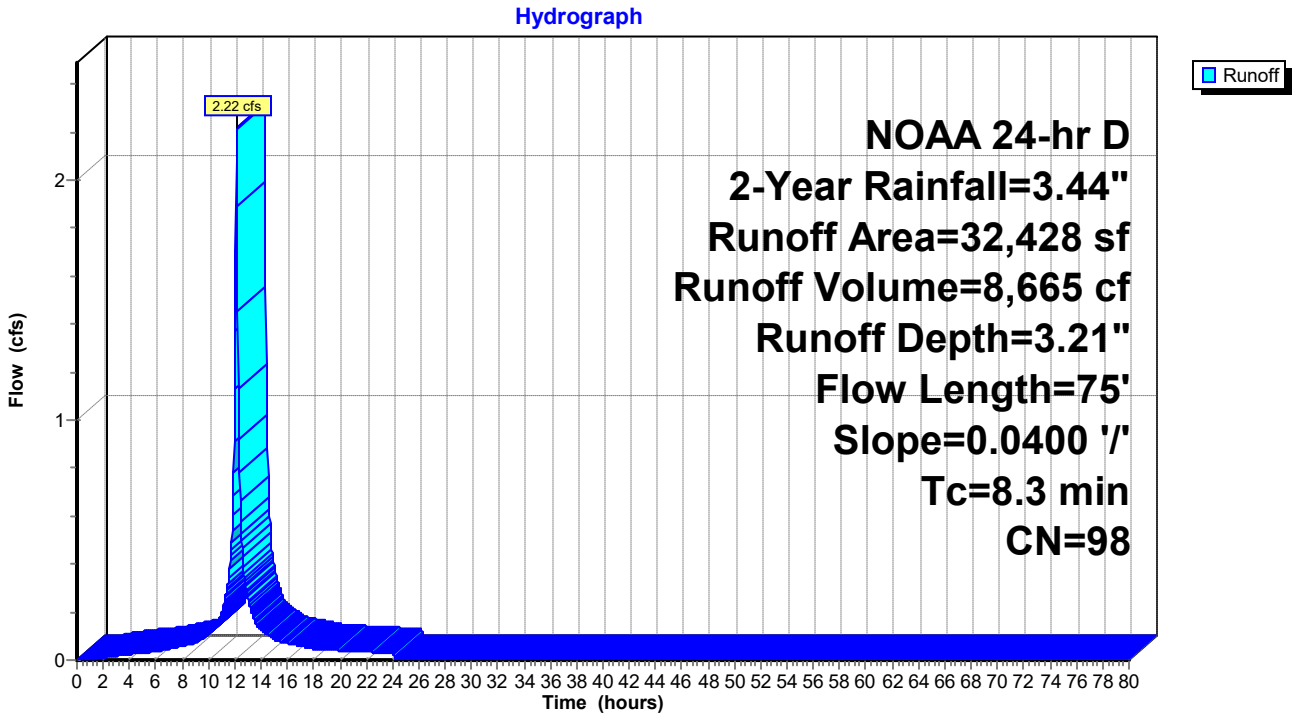
Runoff = 2.22 cfs @ 12.15 hrs, Volume= 8,665 cf, Depth= 3.21"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
18,295	98	Roofs, HSG C
7,163	98	Paved parking, HSG C
32,428	98	Weighted Average
32,428		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 19S: Basin 3 - Imp



Hydrograph for Subcatchment 19S: Basin 3 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.01	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.01	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.02	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.02	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.03	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.03	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.04	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.05	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.06	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.07	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.09	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.13	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.24	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**1.13**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.31**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.15	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.11	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.08	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.07	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.06	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.05	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.04	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.04	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.04	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.04	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.04	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.03	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.03	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.03	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 20S: Basin 3 - Perv

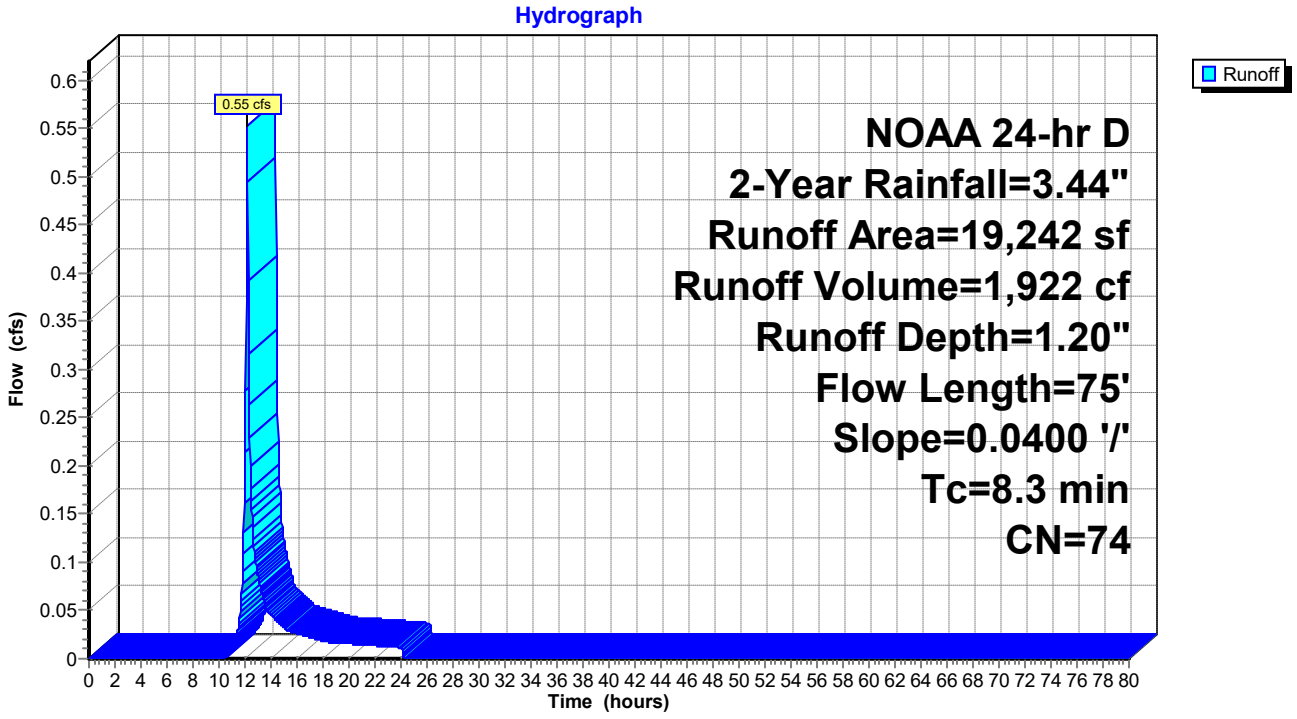
Runoff = 0.55 cfs @ 12.16 hrs, Volume= 1,922 cf, Depth= 1.20"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
19,242	74	>75% Grass cover, Good, HSG C
19,242		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 20S: Basin 3 - Perv



Hydrograph for Subcatchment 20S: Basin 3 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.20	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.20	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.20	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.20	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.20	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.20	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.20	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.20	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.20	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.20	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.20	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.20	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.20	0.00
10.40	0.75	0.00	0.00	51.20	3.44	1.20	0.00
11.20	0.96	0.02	0.02	52.00	3.44	1.20	0.00
12.00	1.65	0.20	**0.21**	52.80	3.44	1.20	0.00
12.80	2.48	0.60	**0.10**	53.60	3.44	1.20	0.00
13.60	2.69	0.72	0.05	54.40	3.44	1.20	0.00
14.40	2.82	0.80	0.04	55.20	3.44	1.20	0.00
15.20	2.92	0.85	0.03	56.00	3.44	1.20	0.00
16.00	2.99	0.90	0.03	56.80	3.44	1.20	0.00
16.80	3.06	0.95	0.02	57.60	3.44	1.20	0.00
17.60	3.12	0.99	0.02	58.40	3.44	1.20	0.00
18.40	3.17	1.02	0.02	59.20	3.44	1.20	0.00
19.20	3.22	1.05	0.02	60.00	3.44	1.20	0.00
20.00	3.26	1.08	0.02	60.80	3.44	1.20	0.00
20.80	3.30	1.10	0.01	61.60	3.44	1.20	0.00
21.60	3.34	1.13	0.01	62.40	3.44	1.20	0.00
22.40	3.38	1.15	0.01	63.20	3.44	1.20	0.00
23.20	3.41	1.18	0.01	64.00	3.44	1.20	0.00
24.00	**3.44**	**1.20**	0.01	64.80	3.44	1.20	0.00
24.80	3.44	1.20	0.00	65.60	3.44	1.20	0.00
25.60	3.44	1.20	0.00	66.40	3.44	1.20	0.00
26.40	3.44	1.20	0.00	67.20	3.44	1.20	0.00
27.20	3.44	1.20	0.00	68.00	3.44	1.20	0.00
28.00	3.44	1.20	0.00	68.80	3.44	1.20	0.00
28.80	3.44	1.20	0.00	69.60	3.44	1.20	0.00
29.60	3.44	1.20	0.00	70.40	3.44	1.20	0.00
30.40	3.44	1.20	0.00	71.20	3.44	1.20	0.00
31.20	3.44	1.20	0.00	72.00	3.44	1.20	0.00
32.00	3.44	1.20	0.00	72.80	3.44	1.20	0.00
32.80	3.44	1.20	0.00	73.60	3.44	1.20	0.00
33.60	3.44	1.20	0.00	74.40	3.44	1.20	0.00
34.40	3.44	1.20	0.00	75.20	3.44	1.20	0.00
35.20	3.44	1.20	0.00	76.00	3.44	1.20	0.00
36.00	3.44	1.20	0.00	76.80	3.44	1.20	0.00
36.80	3.44	1.20	0.00	77.60	3.44	1.20	0.00
37.60	3.44	1.20	0.00	78.40	3.44	1.20	0.00
38.40	3.44	1.20	0.00	79.20	3.44	1.20	0.00
39.20	3.44	1.20	0.00	80.00	3.44	1.20	0.00
40.00	3.44	1.20	0.00				

Summary for Subcatchment 21S: Basin 4 - Imp

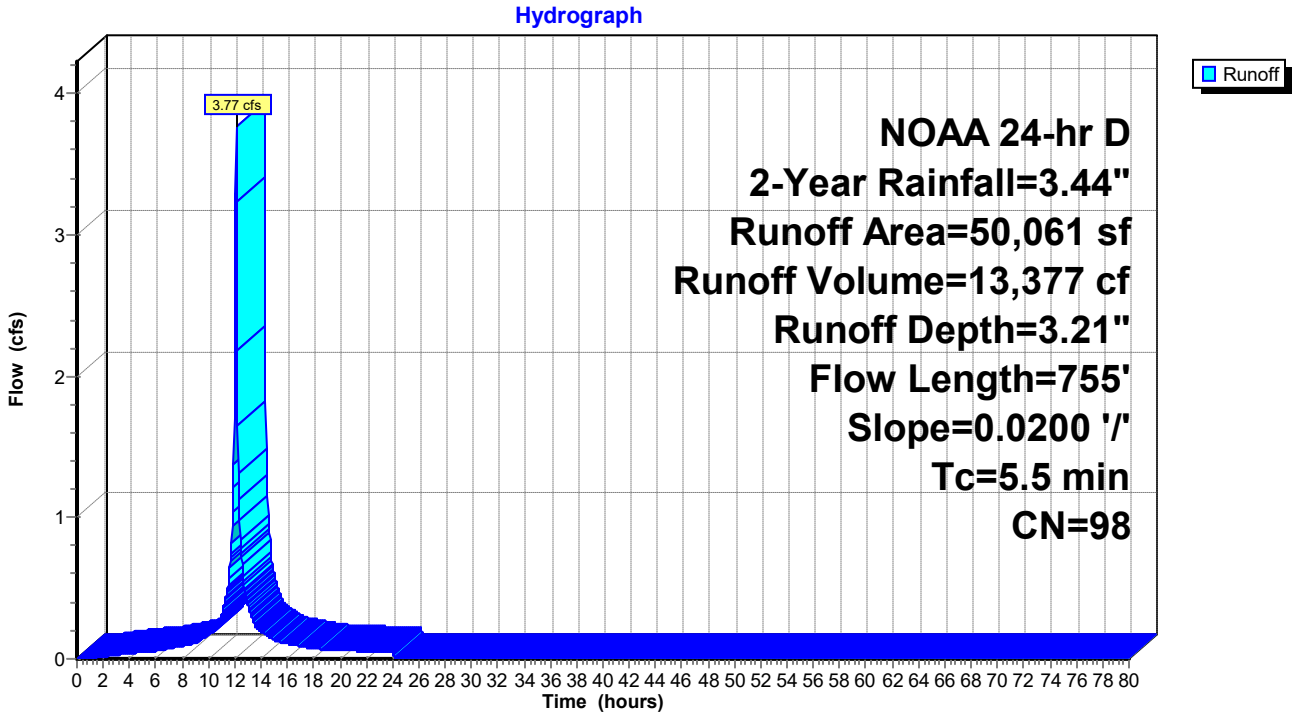
Runoff = 3.77 cfs @ 12.12 hrs, Volume= 13,377 cf, Depth= 3.21"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
43,091	98	Paved parking, HSG C
50,061	98	Weighted Average
50,061		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 21S: Basin 4 - Imp



Hydrograph for Subcatchment 21S: Basin 4 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.01	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.02	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.03	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.04	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.05	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.05	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.06	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.08	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.09	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.11	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.15	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.20	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.39	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**2.15**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.46**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.22	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.17	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.12	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.11	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.09	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.08	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.07	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.06	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.06	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.06	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.05	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.05	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.05	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.04	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 24S: Basin 4 - Perv

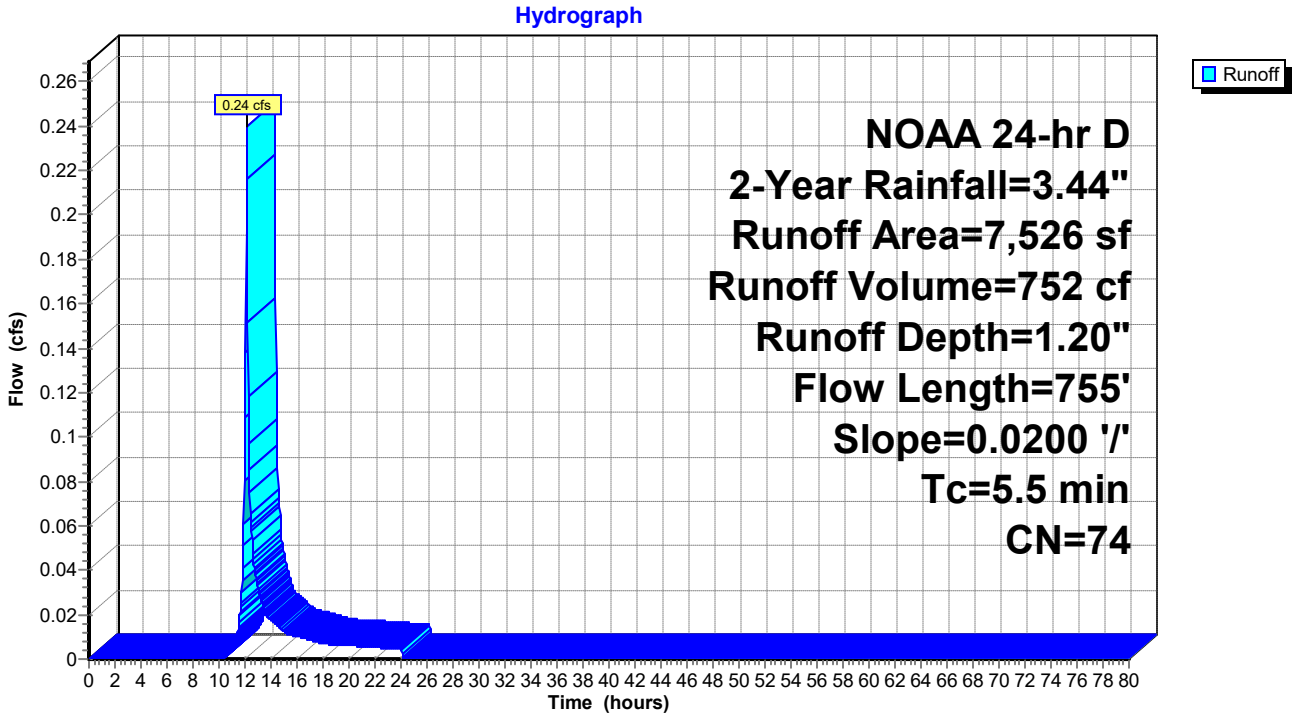
Runoff = 0.24 cfs @ 12.13 hrs, Volume= 752 cf, Depth= 1.20"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
7,526	74	>75% Grass cover, Good, HSG C
7,526		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 24S: Basin 4 - Perv



Hydrograph for Subcatchment 24S: Basin 4 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.20	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.20	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.20	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.20	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.20	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.20	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.20	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.20	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.20	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.20	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.20	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.20	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.20	0.00
10.40	0.75	0.00	0.00	51.20	3.44	1.20	0.00
11.20	0.96	0.02	0.01	52.00	3.44	1.20	0.00
12.00	1.65	0.20	**0.11**	52.80	3.44	1.20	0.00
12.80	2.48	0.60	**0.04**	53.60	3.44	1.20	0.00
13.60	2.69	0.72	0.02	54.40	3.44	1.20	0.00
14.40	2.82	0.80	0.02	55.20	3.44	1.20	0.00
15.20	2.92	0.85	0.01	56.00	3.44	1.20	0.00
16.00	2.99	0.90	0.01	56.80	3.44	1.20	0.00
16.80	3.06	0.95	0.01	57.60	3.44	1.20	0.00
17.60	3.12	0.99	0.01	58.40	3.44	1.20	0.00
18.40	3.17	1.02	0.01	59.20	3.44	1.20	0.00
19.20	3.22	1.05	0.01	60.00	3.44	1.20	0.00
20.00	3.26	1.08	0.01	60.80	3.44	1.20	0.00
20.80	3.30	1.10	0.01	61.60	3.44	1.20	0.00
21.60	3.34	1.13	0.01	62.40	3.44	1.20	0.00
22.40	3.38	1.15	0.01	63.20	3.44	1.20	0.00
23.20	3.41	1.18	0.00	64.00	3.44	1.20	0.00
24.00	**3.44**	**1.20**	0.00	64.80	3.44	1.20	0.00
24.80	3.44	1.20	0.00	65.60	3.44	1.20	0.00
25.60	3.44	1.20	0.00	66.40	3.44	1.20	0.00
26.40	3.44	1.20	0.00	67.20	3.44	1.20	0.00
27.20	3.44	1.20	0.00	68.00	3.44	1.20	0.00
28.00	3.44	1.20	0.00	68.80	3.44	1.20	0.00
28.80	3.44	1.20	0.00	69.60	3.44	1.20	0.00
29.60	3.44	1.20	0.00	70.40	3.44	1.20	0.00
30.40	3.44	1.20	0.00	71.20	3.44	1.20	0.00
31.20	3.44	1.20	0.00	72.00	3.44	1.20	0.00
32.00	3.44	1.20	0.00	72.80	3.44	1.20	0.00
32.80	3.44	1.20	0.00	73.60	3.44	1.20	0.00
33.60	3.44	1.20	0.00	74.40	3.44	1.20	0.00
34.40	3.44	1.20	0.00	75.20	3.44	1.20	0.00
35.20	3.44	1.20	0.00	76.00	3.44	1.20	0.00
36.00	3.44	1.20	0.00	76.80	3.44	1.20	0.00
36.80	3.44	1.20	0.00	77.60	3.44	1.20	0.00
37.60	3.44	1.20	0.00	78.40	3.44	1.20	0.00
38.40	3.44	1.20	0.00	79.20	3.44	1.20	0.00
39.20	3.44	1.20	0.00	80.00	3.44	1.20	0.00
40.00	3.44	1.20	0.00				

Summary for Subcatchment 25S: Basin 2 - Perv

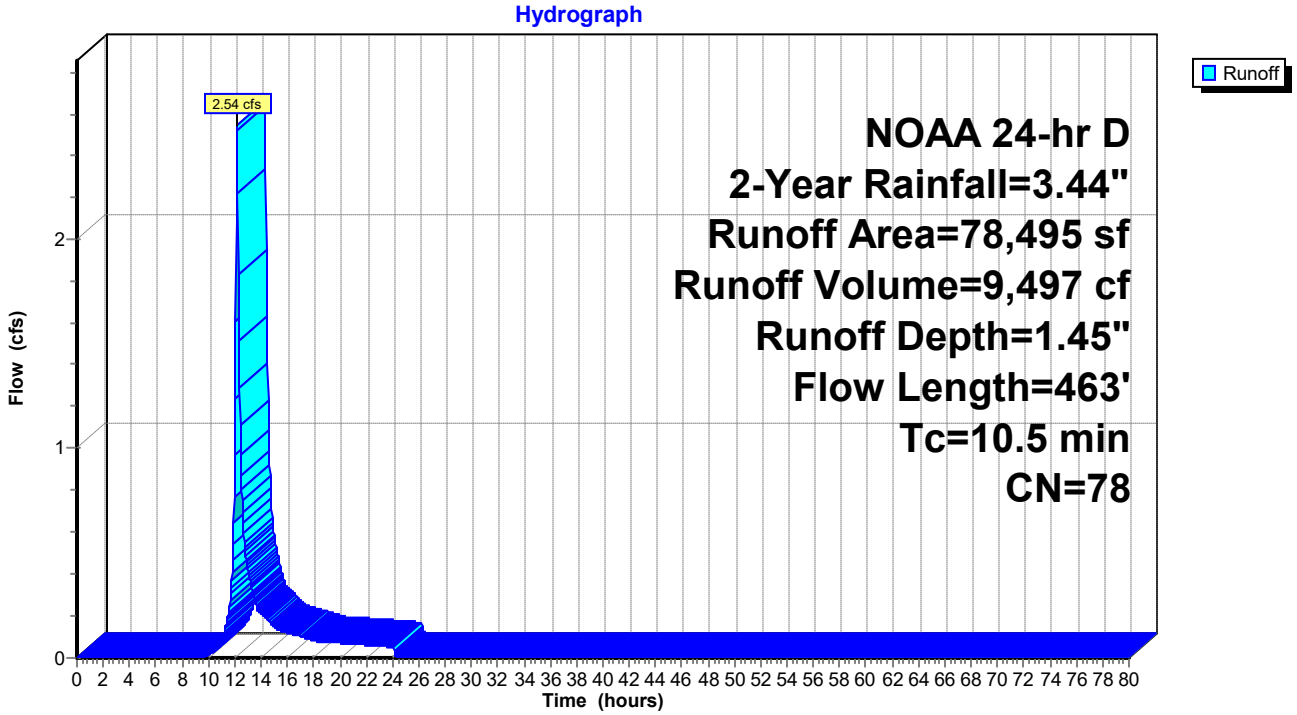
Runoff = 2.54 cfs @ 12.18 hrs, Volume= 9,497 cf, Depth= 1.45"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
47,097	80	>75% Grass cover, Good, HSG D
31,398	74	>75% Grass cover, Good, HSG C
78,495	78	Weighted Average
78,495		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 25S: Basin 2 - Perv



Hydrograph for Subcatchment 25S: Basin 2 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.45	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.45	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.45	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.45	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.45	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.45	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.45	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.45	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.45	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.45	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.45	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.45	0.00
9.60	0.62	0.00	0.01	50.40	3.44	1.45	0.00
10.40	0.75	0.01	0.03	51.20	3.44	1.45	0.00
11.20	0.96	0.05	0.12	52.00	3.44	1.45	0.00
12.00	1.65	0.30	**0.97**	52.80	3.44	1.45	0.00
12.80	2.48	0.77	**0.51**	53.60	3.44	1.45	0.00
13.60	2.69	0.91	0.26	54.40	3.44	1.45	0.00
14.40	2.82	1.00	0.19	55.20	3.44	1.45	0.00
15.20	2.92	1.07	0.14	56.00	3.44	1.45	0.00
16.00	2.99	1.12	0.12	56.80	3.44	1.45	0.00
16.80	3.06	1.17	0.11	57.60	3.44	1.45	0.00
17.60	3.12	1.22	0.09	58.40	3.44	1.45	0.00
18.40	3.17	1.25	0.08	59.20	3.44	1.45	0.00
19.20	3.22	1.29	0.08	60.00	3.44	1.45	0.00
20.00	3.26	1.32	0.07	60.80	3.44	1.45	0.00
20.80	3.30	1.35	0.07	61.60	3.44	1.45	0.00
21.60	3.34	1.38	0.06	62.40	3.44	1.45	0.00
22.40	3.38	1.40	0.06	63.20	3.44	1.45	0.00
23.20	3.41	1.43	0.06	64.00	3.44	1.45	0.00
24.00	**3.44**	**1.45**	0.05	64.80	3.44	1.45	0.00
24.80	3.44	1.45	0.00	65.60	3.44	1.45	0.00
25.60	3.44	1.45	0.00	66.40	3.44	1.45	0.00
26.40	3.44	1.45	0.00	67.20	3.44	1.45	0.00
27.20	3.44	1.45	0.00	68.00	3.44	1.45	0.00
28.00	3.44	1.45	0.00	68.80	3.44	1.45	0.00
28.80	3.44	1.45	0.00	69.60	3.44	1.45	0.00
29.60	3.44	1.45	0.00	70.40	3.44	1.45	0.00
30.40	3.44	1.45	0.00	71.20	3.44	1.45	0.00
31.20	3.44	1.45	0.00	72.00	3.44	1.45	0.00
32.00	3.44	1.45	0.00	72.80	3.44	1.45	0.00
32.80	3.44	1.45	0.00	73.60	3.44	1.45	0.00
33.60	3.44	1.45	0.00	74.40	3.44	1.45	0.00
34.40	3.44	1.45	0.00	75.20	3.44	1.45	0.00
35.20	3.44	1.45	0.00	76.00	3.44	1.45	0.00
36.00	3.44	1.45	0.00	76.80	3.44	1.45	0.00
36.80	3.44	1.45	0.00	77.60	3.44	1.45	0.00
37.60	3.44	1.45	0.00	78.40	3.44	1.45	0.00
38.40	3.44	1.45	0.00	79.20	3.44	1.45	0.00
39.20	3.44	1.45	0.00	80.00	3.44	1.45	0.00
40.00	3.44	1.45	0.00				

Summary for Subcatchment 28S: Basin 2 - Imp

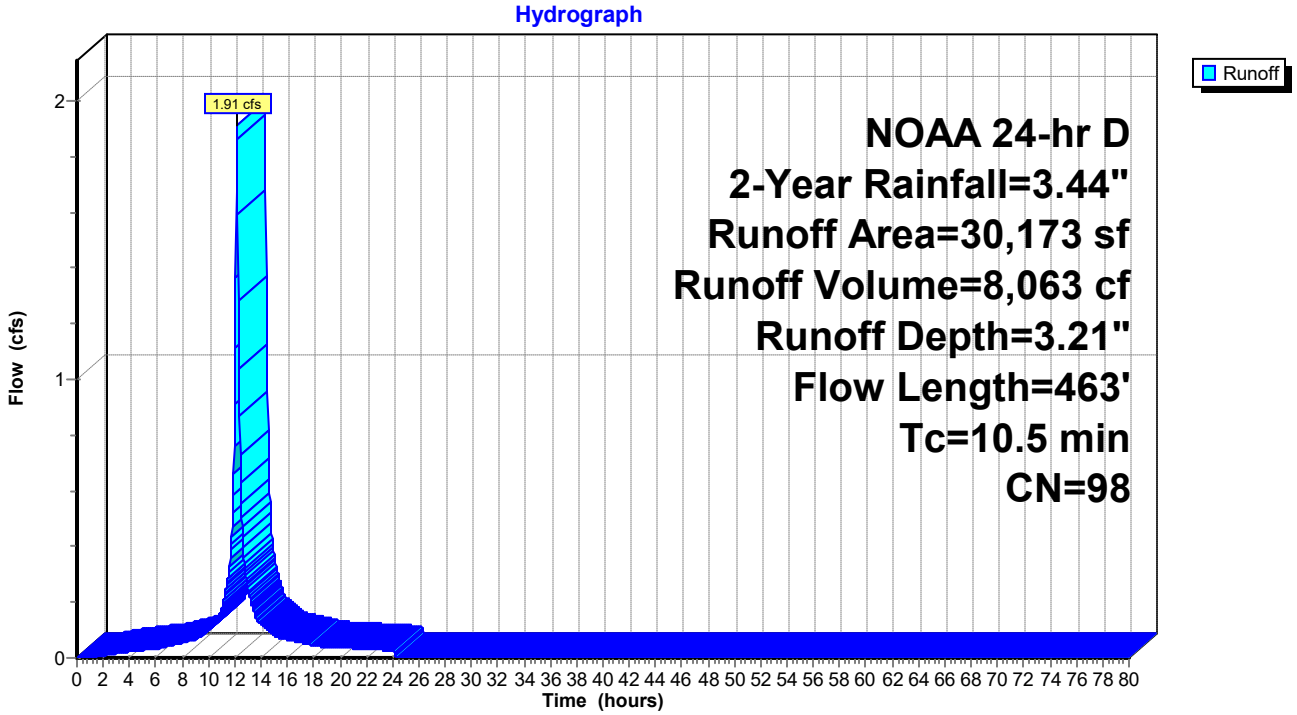
Runoff = 1.91 cfs @ 12.17 hrs, Volume= 8,063 cf, Depth= 3.21"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
28,866	98	Paved parking, HSG C
1,307	98	Paved parking, HSG D
30,173	98	Weighted Average
30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 28S: Basin 2 - Imp



Hydrograph for Subcatchment 28S: Basin 2 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.00	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.01	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.02	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.02	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.03	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.03	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.04	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.05	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.05	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.06	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.09	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.12	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.22	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**0.91**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.31**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.15	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.10	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.07	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.07	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.06	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.05	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.04	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.04	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.04	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.04	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.03	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.03	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.03	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.03	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 29S: Basin 8 - Imp

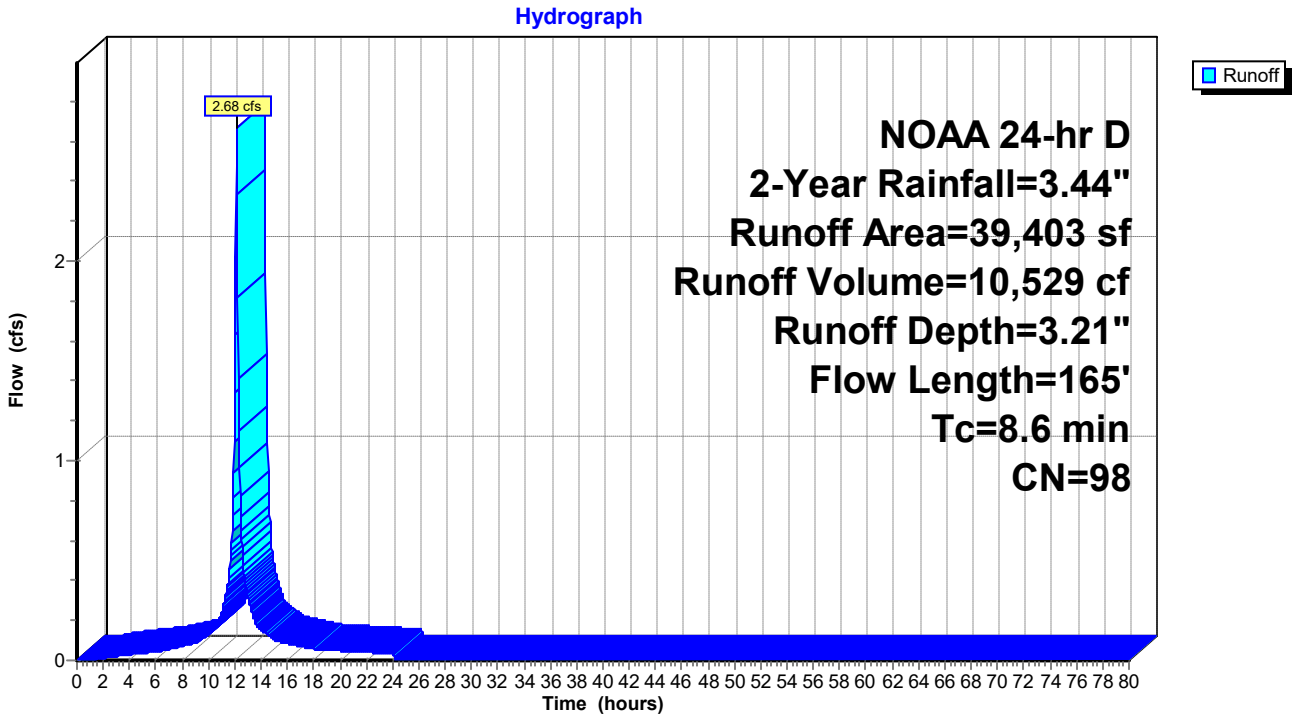
Runoff = 2.68 cfs @ 12.15 hrs, Volume= 10,529 cf, Depth= 3.21"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
24,632	98	Paved parking, HSG C
14,771	98	Paved parking, HSG D
39,403	98	Weighted Average
39,403		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 29S: Basin 8 - Imp



Hydrograph for Subcatchment 29S: Basin 8 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.01	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.02	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.02	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.03	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.04	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.04	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.05	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.06	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.07	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.08	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.11	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.15	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.29	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**1.34**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.38**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.19	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.14	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.10	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.09	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.07	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.06	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.05	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.05	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.05	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.05	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.04	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.04	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.04	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.03	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 30S: Basin 8 - Perv

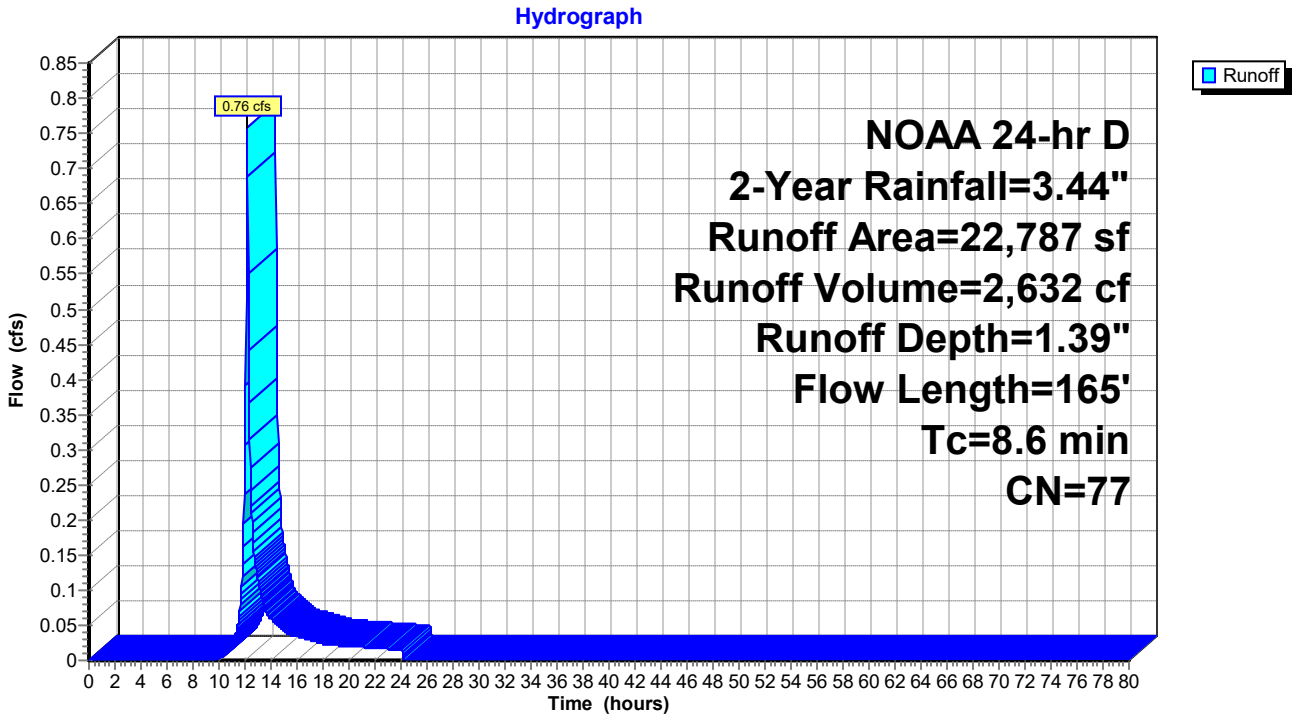
Runoff = 0.76 cfs @ 12.16 hrs, Volume= 2,632 cf, Depth= 1.39"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
11,542	80	>75% Grass cover, Good, HSG D
11,245	74	>75% Grass cover, Good, HSG C
22,787	77	Weighted Average
22,787		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 30S: Basin 8 - Perv



Hydrograph for Subcatchment 30S: Basin 8 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.39	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.39	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.39	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.39	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.39	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.39	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.39	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.39	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.39	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.39	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.39	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.39	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.39	0.00
10.40	0.75	0.01	0.01	51.20	3.44	1.39	0.00
11.20	0.96	0.04	0.03	52.00	3.44	1.39	0.00
12.00	1.65	0.27	**0.31**	52.80	3.44	1.39	0.00
12.80	2.48	0.73	**0.14**	53.60	3.44	1.39	0.00
13.60	2.69	0.86	0.07	54.40	3.44	1.39	0.00
14.40	2.82	0.95	0.05	55.20	3.44	1.39	0.00
15.20	2.92	1.01	0.04	56.00	3.44	1.39	0.00
16.00	2.99	1.07	0.03	56.80	3.44	1.39	0.00
16.80	3.06	1.11	0.03	57.60	3.44	1.39	0.00
17.60	3.12	1.16	0.03	58.40	3.44	1.39	0.00
18.40	3.17	1.19	0.02	59.20	3.44	1.39	0.00
19.20	3.22	1.22	0.02	60.00	3.44	1.39	0.00
20.00	3.26	1.25	0.02	60.80	3.44	1.39	0.00
20.80	3.30	1.28	0.02	61.60	3.44	1.39	0.00
21.60	3.34	1.31	0.02	62.40	3.44	1.39	0.00
22.40	3.38	1.34	0.02	63.20	3.44	1.39	0.00
23.20	3.41	1.36	0.02	64.00	3.44	1.39	0.00
24.00	**3.44**	**1.39**	0.01	64.80	3.44	1.39	0.00
24.80	3.44	1.39	0.00	65.60	3.44	1.39	0.00
25.60	3.44	1.39	0.00	66.40	3.44	1.39	0.00
26.40	3.44	1.39	0.00	67.20	3.44	1.39	0.00
27.20	3.44	1.39	0.00	68.00	3.44	1.39	0.00
28.00	3.44	1.39	0.00	68.80	3.44	1.39	0.00
28.80	3.44	1.39	0.00	69.60	3.44	1.39	0.00
29.60	3.44	1.39	0.00	70.40	3.44	1.39	0.00
30.40	3.44	1.39	0.00	71.20	3.44	1.39	0.00
31.20	3.44	1.39	0.00	72.00	3.44	1.39	0.00
32.00	3.44	1.39	0.00	72.80	3.44	1.39	0.00
32.80	3.44	1.39	0.00	73.60	3.44	1.39	0.00
33.60	3.44	1.39	0.00	74.40	3.44	1.39	0.00
34.40	3.44	1.39	0.00	75.20	3.44	1.39	0.00
35.20	3.44	1.39	0.00	76.00	3.44	1.39	0.00
36.00	3.44	1.39	0.00	76.80	3.44	1.39	0.00
36.80	3.44	1.39	0.00	77.60	3.44	1.39	0.00
37.60	3.44	1.39	0.00	78.40	3.44	1.39	0.00
38.40	3.44	1.39	0.00	79.20	3.44	1.39	0.00
39.20	3.44	1.39	0.00	80.00	3.44	1.39	0.00
40.00	3.44	1.39	0.00				

Summary for Subcatchment 31S: Basin 7 - Imp

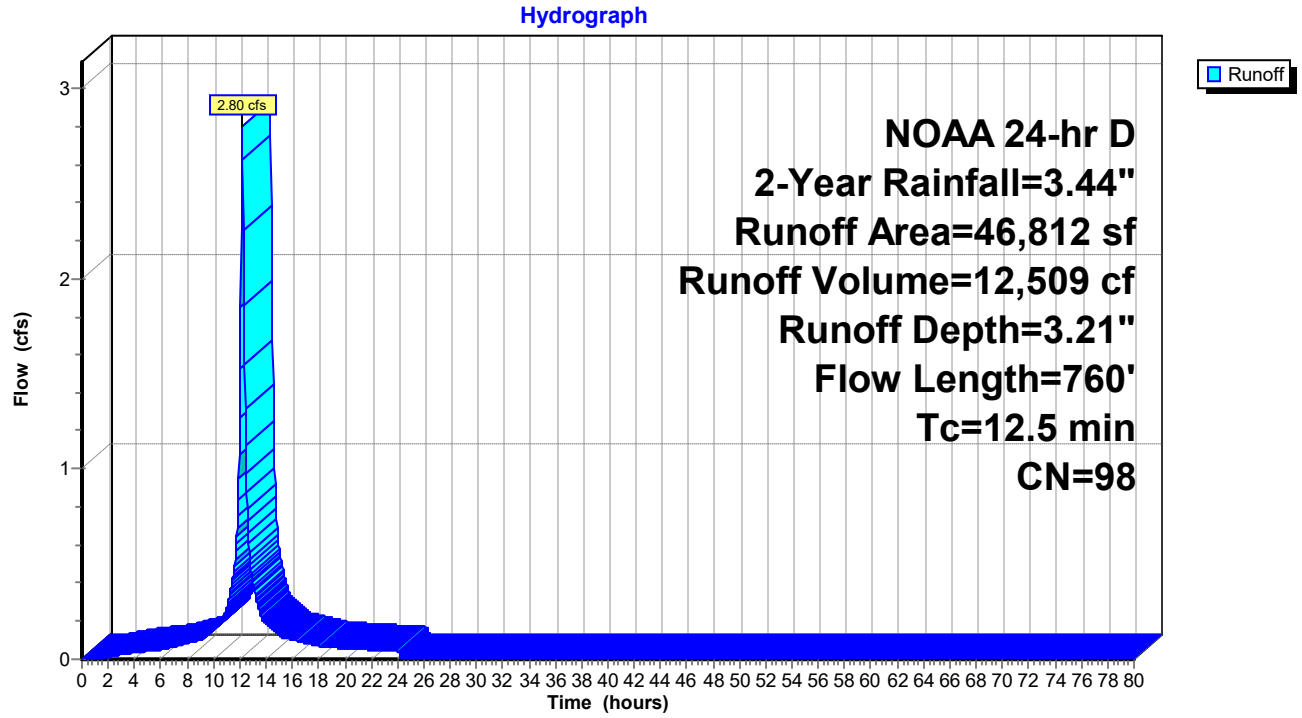
Runoff = 2.80 cfs @ 12.20 hrs, Volume= 12,509 cf, Depth= 3.21"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
15,723	98	Paved parking, HSG D
31,089	98	Paved parking, HSG C
46,812	98	Weighted Average
46,812		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 31S: Basin 7 - Imp



Hydrograph for Subcatchment 31S: Basin 7 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.01	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.02	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.03	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.04	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.04	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.05	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.06	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.07	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.08	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.10	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.13	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.18	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.32	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**1.27**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.50**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.23	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.16	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.12	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.10	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.09	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.08	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.06	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.06	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.06	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.05	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.05	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.05	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.04	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.04	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 32S: Basin 7 - Perv

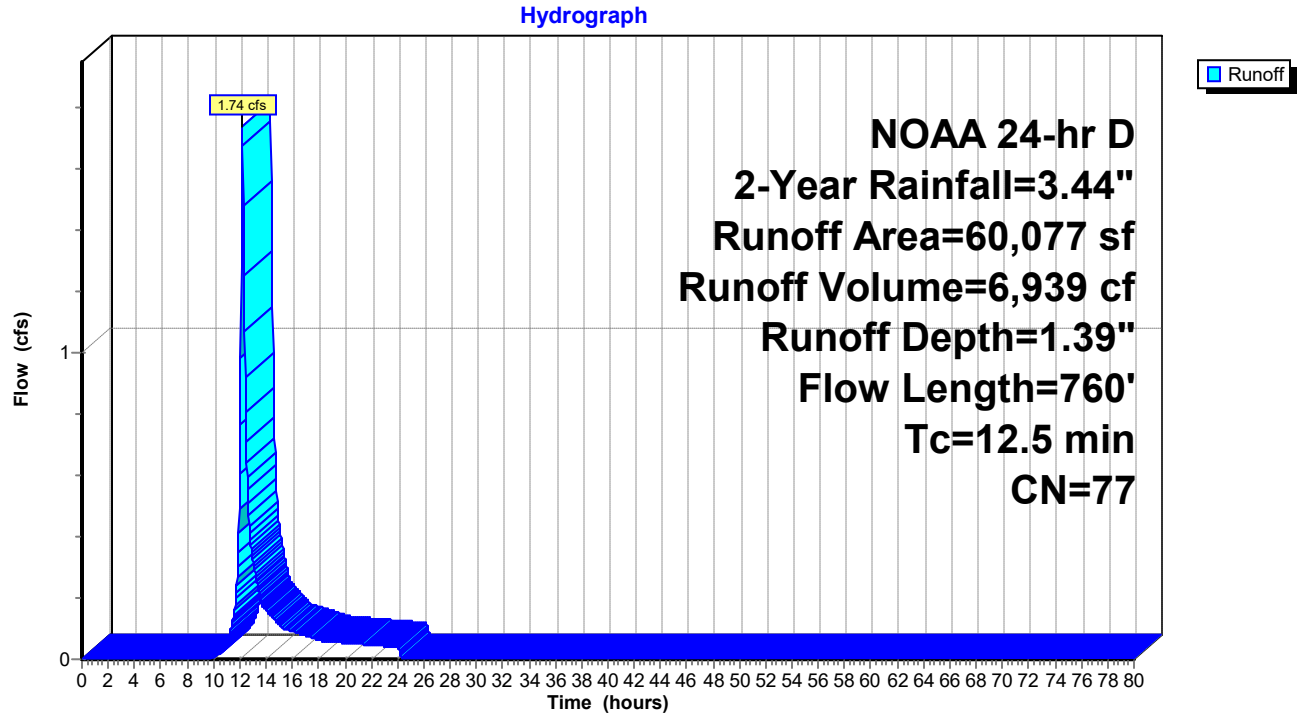
Runoff = 1.74 cfs @ 12.21 hrs, Volume= 6,939 cf, Depth= 1.39"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
25,517	80	>75% Grass cover, Good, HSG D
34,560	74	>75% Grass cover, Good, HSG C
60,077	77	Weighted Average
60,077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 32S: Basin 7 - Perv



Hydrograph for Subcatchment 32S: Basin 7 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.39	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.39	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.39	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.39	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.39	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.39	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.39	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.39	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.39	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.39	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.39	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.39	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.39	0.00
10.40	0.75	0.01	0.02	51.20	3.44	1.39	0.00
11.20	0.96	0.04	0.08	52.00	3.44	1.39	0.00
12.00	1.65	0.27	**0.61**	52.80	3.44	1.39	0.00
12.80	2.48	0.73	**0.39**	53.60	3.44	1.39	0.00
13.60	2.69	0.86	0.20	54.40	3.44	1.39	0.00
14.40	2.82	0.95	0.14	55.20	3.44	1.39	0.00
15.20	2.92	1.01	0.10	56.00	3.44	1.39	0.00
16.00	2.99	1.07	0.09	56.80	3.44	1.39	0.00
16.80	3.06	1.11	0.08	57.60	3.44	1.39	0.00
17.60	3.12	1.16	0.07	58.40	3.44	1.39	0.00
18.40	3.17	1.19	0.06	59.20	3.44	1.39	0.00
19.20	3.22	1.22	0.06	60.00	3.44	1.39	0.00
20.00	3.26	1.25	0.05	60.80	3.44	1.39	0.00
20.80	3.30	1.28	0.05	61.60	3.44	1.39	0.00
21.60	3.34	1.31	0.05	62.40	3.44	1.39	0.00
22.40	3.38	1.34	0.04	63.20	3.44	1.39	0.00
23.20	3.41	1.36	0.04	64.00	3.44	1.39	0.00
24.00	**3.44**	**1.39**	0.04	64.80	3.44	1.39	0.00
24.80	3.44	1.39	0.00	65.60	3.44	1.39	0.00
25.60	3.44	1.39	0.00	66.40	3.44	1.39	0.00
26.40	3.44	1.39	0.00	67.20	3.44	1.39	0.00
27.20	3.44	1.39	0.00	68.00	3.44	1.39	0.00
28.00	3.44	1.39	0.00	68.80	3.44	1.39	0.00
28.80	3.44	1.39	0.00	69.60	3.44	1.39	0.00
29.60	3.44	1.39	0.00	70.40	3.44	1.39	0.00
30.40	3.44	1.39	0.00	71.20	3.44	1.39	0.00
31.20	3.44	1.39	0.00	72.00	3.44	1.39	0.00
32.00	3.44	1.39	0.00	72.80	3.44	1.39	0.00
32.80	3.44	1.39	0.00	73.60	3.44	1.39	0.00
33.60	3.44	1.39	0.00	74.40	3.44	1.39	0.00
34.40	3.44	1.39	0.00	75.20	3.44	1.39	0.00
35.20	3.44	1.39	0.00	76.00	3.44	1.39	0.00
36.00	3.44	1.39	0.00	76.80	3.44	1.39	0.00
36.80	3.44	1.39	0.00	77.60	3.44	1.39	0.00
37.60	3.44	1.39	0.00	78.40	3.44	1.39	0.00
38.40	3.44	1.39	0.00	79.20	3.44	1.39	0.00
39.20	3.44	1.39	0.00	80.00	3.44	1.39	0.00
40.00	3.44	1.39	0.00				

Summary for Subcatchment 35S: DA 2 Und - Imp

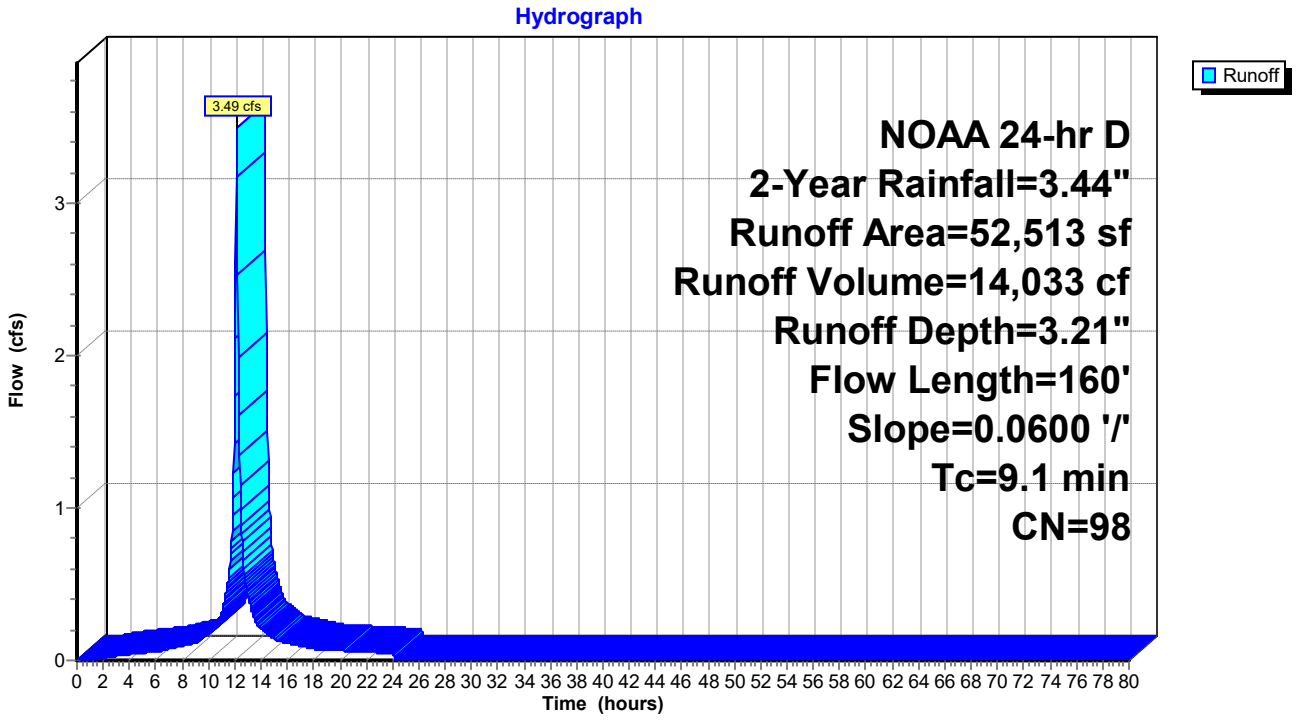
Runoff = 3.49 cfs @ 12.16 hrs, Volume= 14,033 cf, Depth= 3.21"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
19,504	98	Paved parking, HSG C
33,009	98	Paved parking, HSG D
52,513	98	Weighted Average
52,513		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 35S: DA 2 Und - Imp



Hydrograph for Subcatchment 35S: DA 2 Und - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.01	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.02	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.03	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.04	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.05	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.05	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.06	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.08	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.10	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.11	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.15	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.20	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.38	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**1.73**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.52**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.25	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.18	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.13	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.11	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.10	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.08	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.07	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.07	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.06	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.06	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.06	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.05	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.05	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.05	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 36S: DA 2 Und - Perv

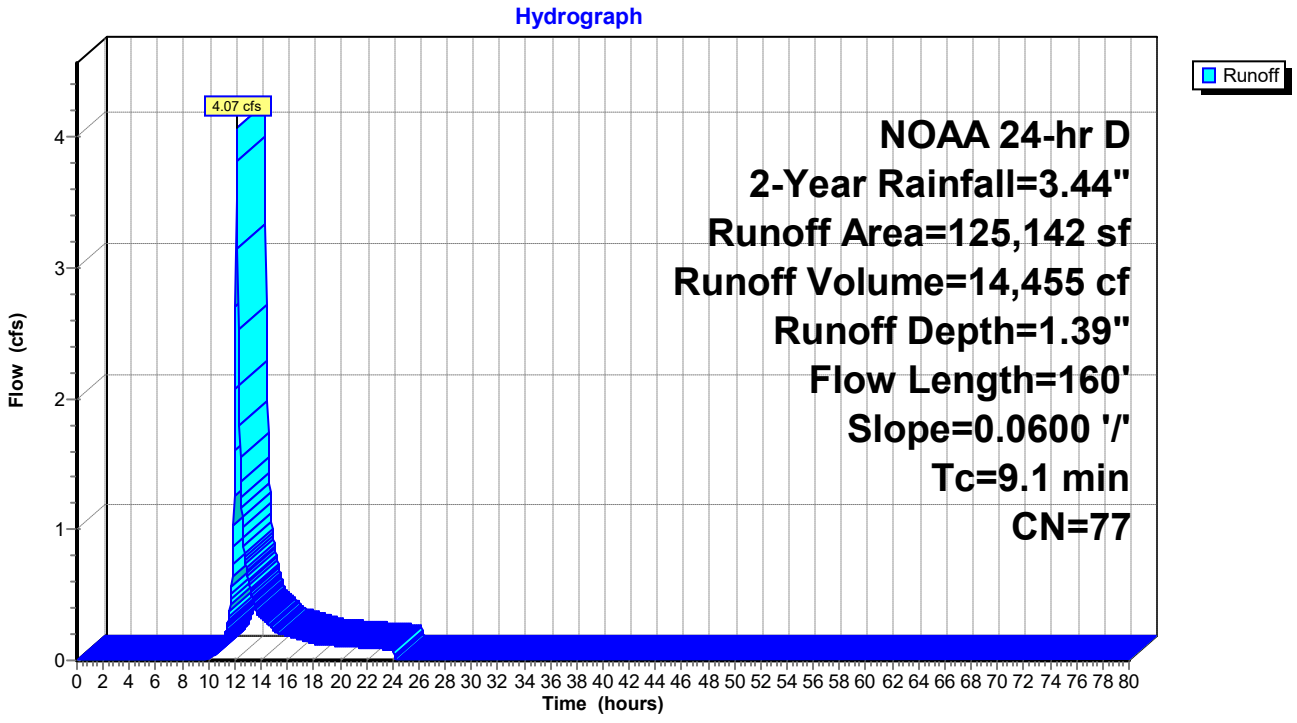
Runoff = 4.07 cfs @ 12.17 hrs, Volume= 14,455 cf, Depth= 1.39"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
57,417	80	>75% Grass cover, Good, HSG D
67,725	74	>75% Grass cover, Good, HSG C
125,142	77	Weighted Average
125,142		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 36S: DA 2 Und - Perv



Hydrograph for Subcatchment 36S: DA 2 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.39	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.39	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.39	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.39	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.39	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.39	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.39	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.39	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.39	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.39	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.39	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.39	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.39	0.00
10.40	0.75	0.01	0.04	51.20	3.44	1.39	0.00
11.20	0.96	0.04	0.17	52.00	3.44	1.39	0.00
12.00	1.65	0.27	**1.61**	52.80	3.44	1.39	0.00
12.80	2.48	0.73	**0.76**	53.60	3.44	1.39	0.00
13.60	2.69	0.86	0.39	54.40	3.44	1.39	0.00
14.40	2.82	0.95	0.29	55.20	3.44	1.39	0.00
15.20	2.92	1.01	0.21	56.00	3.44	1.39	0.00
16.00	2.99	1.07	0.19	56.80	3.44	1.39	0.00
16.80	3.06	1.11	0.17	57.60	3.44	1.39	0.00
17.60	3.12	1.16	0.14	58.40	3.44	1.39	0.00
18.40	3.17	1.19	0.12	59.20	3.44	1.39	0.00
19.20	3.22	1.22	0.12	60.00	3.44	1.39	0.00
20.00	3.26	1.25	0.11	60.80	3.44	1.39	0.00
20.80	3.30	1.28	0.11	61.60	3.44	1.39	0.00
21.60	3.34	1.31	0.10	62.40	3.44	1.39	0.00
22.40	3.38	1.34	0.09	63.20	3.44	1.39	0.00
23.20	3.41	1.36	0.09	64.00	3.44	1.39	0.00
24.00	**3.44**	**1.39**	0.08	64.80	3.44	1.39	0.00
24.80	3.44	1.39	0.00	65.60	3.44	1.39	0.00
25.60	3.44	1.39	0.00	66.40	3.44	1.39	0.00
26.40	3.44	1.39	0.00	67.20	3.44	1.39	0.00
27.20	3.44	1.39	0.00	68.00	3.44	1.39	0.00
28.00	3.44	1.39	0.00	68.80	3.44	1.39	0.00
28.80	3.44	1.39	0.00	69.60	3.44	1.39	0.00
29.60	3.44	1.39	0.00	70.40	3.44	1.39	0.00
30.40	3.44	1.39	0.00	71.20	3.44	1.39	0.00
31.20	3.44	1.39	0.00	72.00	3.44	1.39	0.00
32.00	3.44	1.39	0.00	72.80	3.44	1.39	0.00
32.80	3.44	1.39	0.00	73.60	3.44	1.39	0.00
33.60	3.44	1.39	0.00	74.40	3.44	1.39	0.00
34.40	3.44	1.39	0.00	75.20	3.44	1.39	0.00
35.20	3.44	1.39	0.00	76.00	3.44	1.39	0.00
36.00	3.44	1.39	0.00	76.80	3.44	1.39	0.00
36.80	3.44	1.39	0.00	77.60	3.44	1.39	0.00
37.60	3.44	1.39	0.00	78.40	3.44	1.39	0.00
38.40	3.44	1.39	0.00	79.20	3.44	1.39	0.00
39.20	3.44	1.39	0.00	80.00	3.44	1.39	0.00
40.00	3.44	1.39	0.00				

Summary for Subcatchment 45S: Basin 11 - Imp

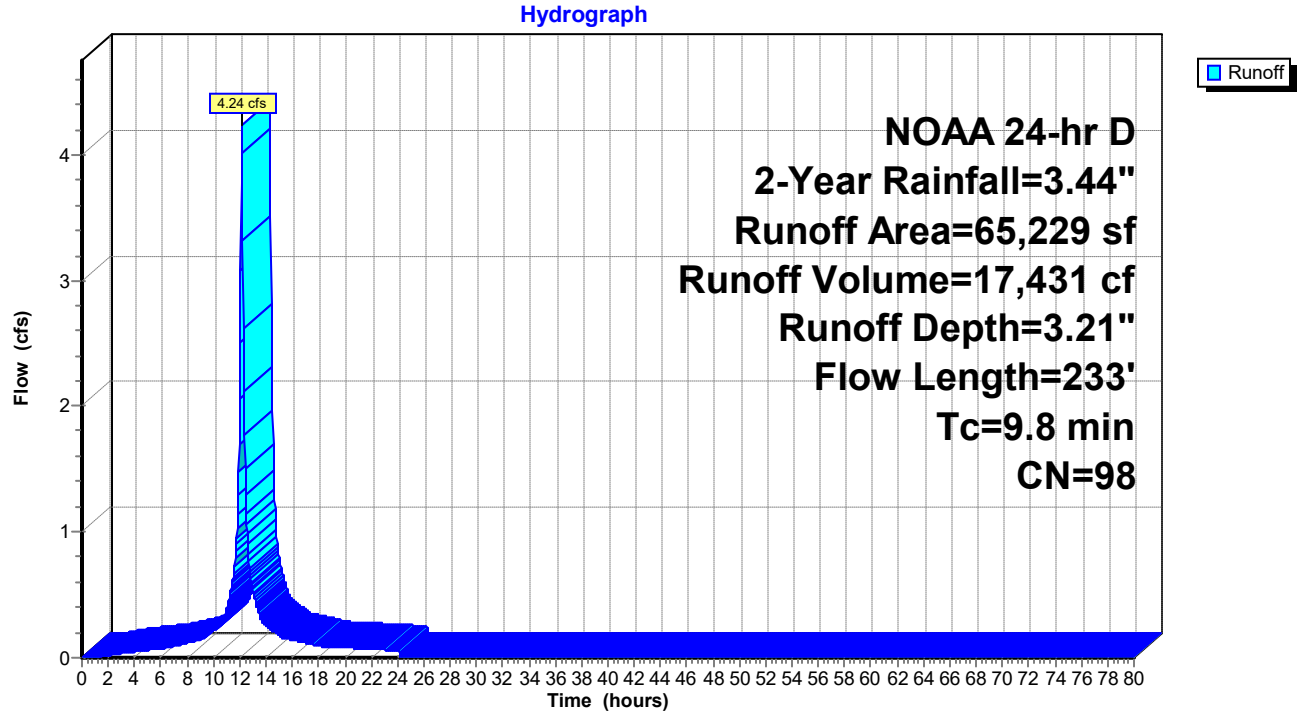
Runoff = 4.24 cfs @ 12.17 hrs, Volume= 17,431 cf, Depth= 3.21"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
4,356	98	Roofs, HSG D
7,377	98	Paved parking, HSG D
27,007	98	Roofs, HSG C
26,489	98	Paved parking, HSG C
65,229	98	Weighted Average
65,229		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 45S: Basin 11 - Imp



Hydrograph for Subcatchment 45S: Basin 11 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.01	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.03	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.04	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.05	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.06	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.07	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.08	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.10	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.12	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.14	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.19	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.25	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.47	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**2.06**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.65**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.31	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.23	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.16	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.14	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.12	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.10	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.09	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.08	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.08	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.08	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.07	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.07	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.06	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.06	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 46S: Basin 11 - Perv

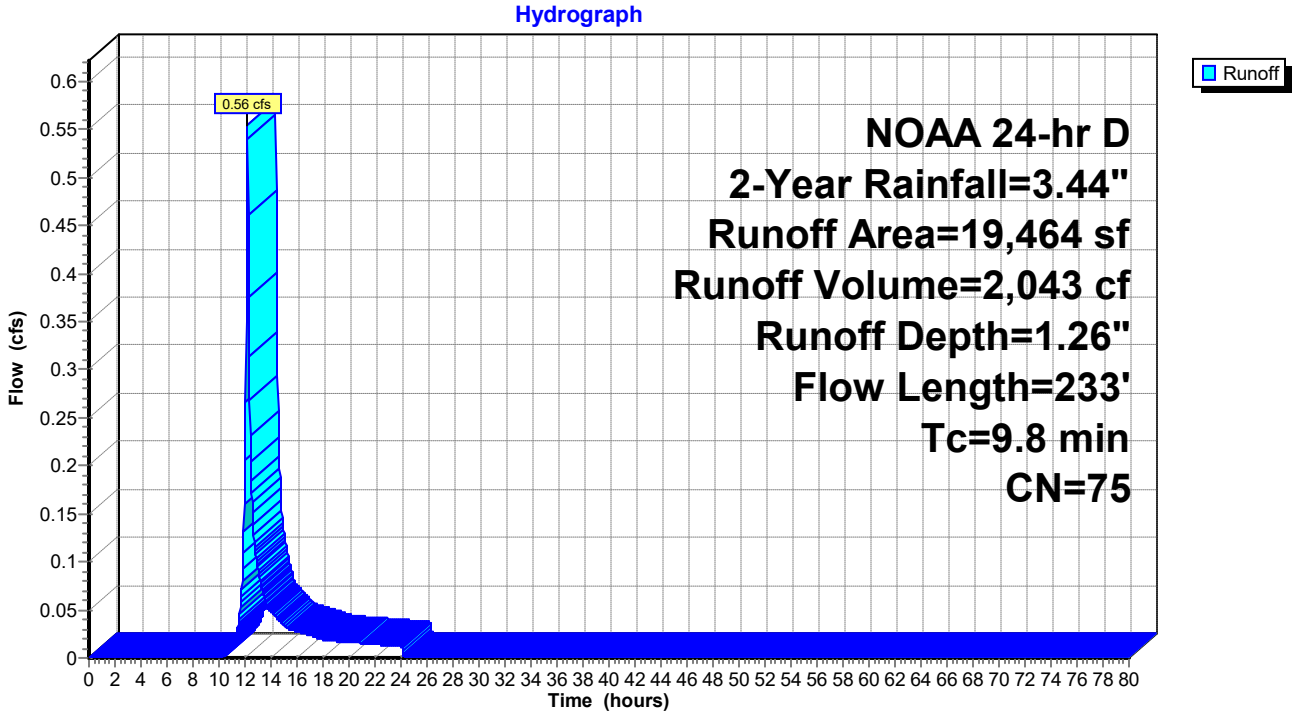
Runoff = 0.56 cfs @ 12.18 hrs, Volume= 2,043 cf, Depth= 1.26"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
2,920	80	>75% Grass cover, Good, HSG D
16,544	74	>75% Grass cover, Good, HSG C
19,464	75	Weighted Average
19,464		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 46S: Basin 11 - Perv



Hydrograph for Subcatchment 46S: Basin 11 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.26	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.26	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.26	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.26	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.26	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.26	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.26	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.26	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.26	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.26	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.26	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.26	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.26	0.00
10.40	0.75	0.00	0.00	51.20	3.44	1.26	0.00
11.20	0.96	0.02	0.02	52.00	3.44	1.26	0.00
12.00	1.65	0.22	**0.21**	52.80	3.44	1.26	0.00
12.80	2.48	0.64	**0.11**	53.60	3.44	1.26	0.00
13.60	2.69	0.76	0.06	54.40	3.44	1.26	0.00
14.40	2.82	0.84	0.04	55.20	3.44	1.26	0.00
15.20	2.92	0.91	0.03	56.00	3.44	1.26	0.00
16.00	2.99	0.96	0.03	56.80	3.44	1.26	0.00
16.80	3.06	1.00	0.02	57.60	3.44	1.26	0.00
17.60	3.12	1.04	0.02	58.40	3.44	1.26	0.00
18.40	3.17	1.07	0.02	59.20	3.44	1.26	0.00
19.20	3.22	1.10	0.02	60.00	3.44	1.26	0.00
20.00	3.26	1.13	0.02	60.80	3.44	1.26	0.00
20.80	3.30	1.16	0.02	61.60	3.44	1.26	0.00
21.60	3.34	1.19	0.01	62.40	3.44	1.26	0.00
22.40	3.38	1.21	0.01	63.20	3.44	1.26	0.00
23.20	3.41	1.24	0.01	64.00	3.44	1.26	0.00
24.00	**3.44**	**1.26**	0.01	64.80	3.44	1.26	0.00
24.80	3.44	1.26	0.00	65.60	3.44	1.26	0.00
25.60	3.44	1.26	0.00	66.40	3.44	1.26	0.00
26.40	3.44	1.26	0.00	67.20	3.44	1.26	0.00
27.20	3.44	1.26	0.00	68.00	3.44	1.26	0.00
28.00	3.44	1.26	0.00	68.80	3.44	1.26	0.00
28.80	3.44	1.26	0.00	69.60	3.44	1.26	0.00
29.60	3.44	1.26	0.00	70.40	3.44	1.26	0.00
30.40	3.44	1.26	0.00	71.20	3.44	1.26	0.00
31.20	3.44	1.26	0.00	72.00	3.44	1.26	0.00
32.00	3.44	1.26	0.00	72.80	3.44	1.26	0.00
32.80	3.44	1.26	0.00	73.60	3.44	1.26	0.00
33.60	3.44	1.26	0.00	74.40	3.44	1.26	0.00
34.40	3.44	1.26	0.00	75.20	3.44	1.26	0.00
35.20	3.44	1.26	0.00	76.00	3.44	1.26	0.00
36.00	3.44	1.26	0.00	76.80	3.44	1.26	0.00
36.80	3.44	1.26	0.00	77.60	3.44	1.26	0.00
37.60	3.44	1.26	0.00	78.40	3.44	1.26	0.00
38.40	3.44	1.26	0.00	79.20	3.44	1.26	0.00
39.20	3.44	1.26	0.00	80.00	3.44	1.26	0.00
40.00	3.44	1.26	0.00				

Summary for Subcatchment 51S: Basin 10 - Imp

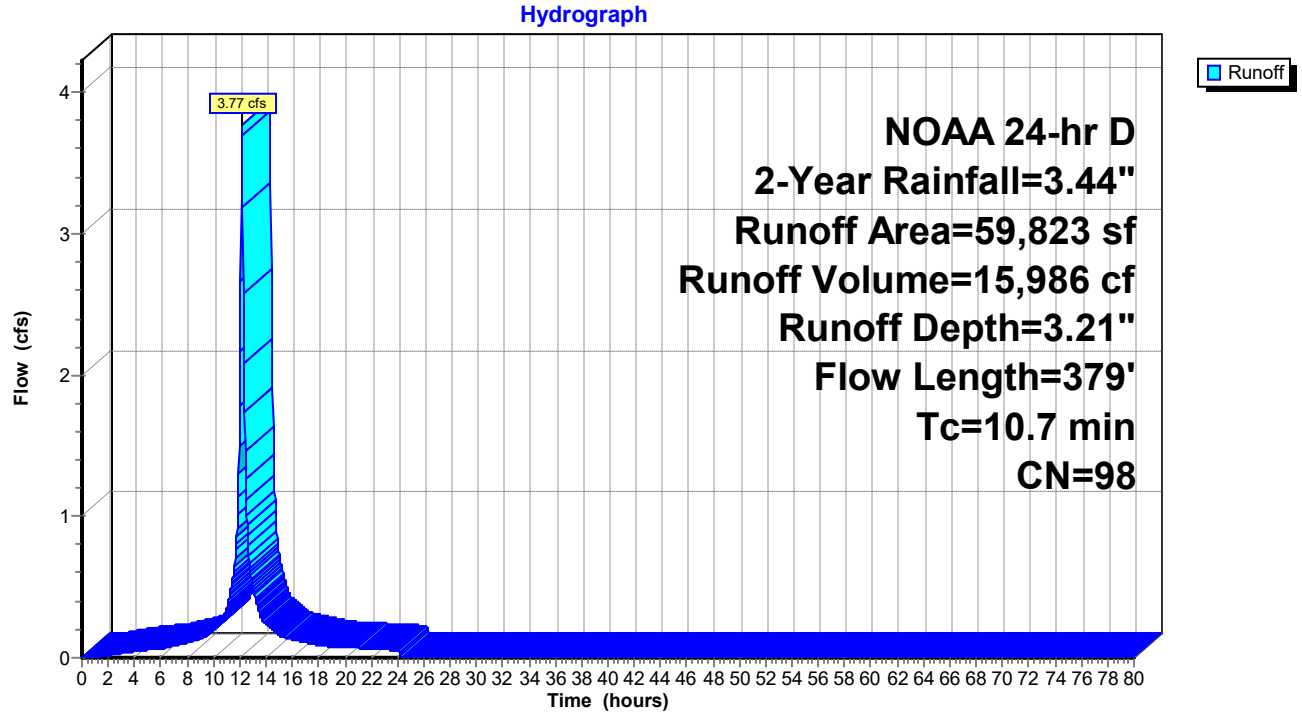
Runoff = 3.77 cfs @ 12.18 hrs, Volume= 15,986 cf, Depth= 3.21"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
19,602	98	Paved parking, HSG C
35,284	98	Roofs, HSG C
4,937	98	Paved parking, HSG D
59,823	98	Weighted Average
59,823		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 51S: Basin 10 - Imp



Hydrograph for Subcatchment 51S: Basin 10 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.01	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.02	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.04	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.05	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.05	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.06	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.07	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.09	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.11	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.13	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.17	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.23	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.42	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**1.79**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.61**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.29	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.21	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.15	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.13	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.11	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.10	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.08	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.08	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.07	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.07	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.07	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.06	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.06	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.05	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 52S: Basin 10 - Perv

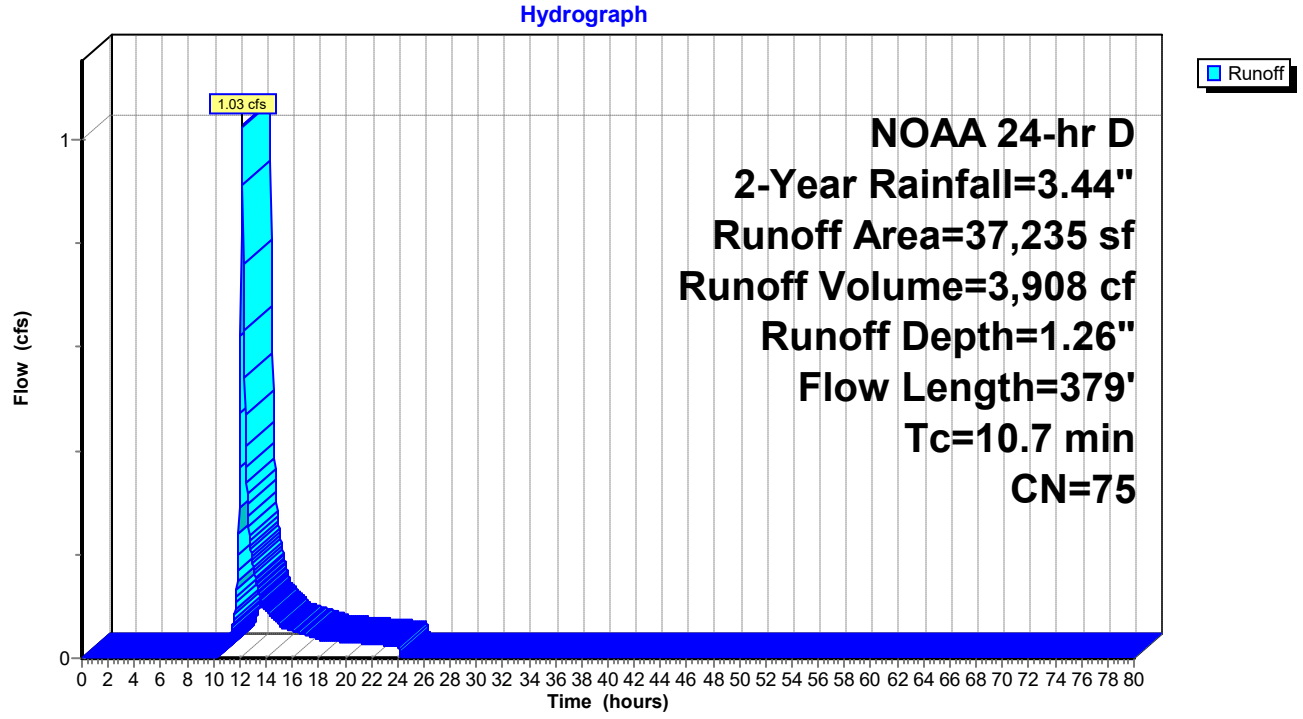
Runoff = 1.03 cfs @ 12.19 hrs, Volume= 3,908 cf, Depth= 1.26"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
7,626	80	>75% Grass cover, Good, HSG D
29,609	74	>75% Grass cover, Good, HSG C
37,235	75	Weighted Average
37,235		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 52S: Basin 10 - Perv



Hydrograph for Subcatchment 52S: Basin 10 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.26	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.26	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.26	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.26	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.26	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.26	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.26	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.26	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.26	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.26	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.26	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.26	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.26	0.00
10.40	0.75	0.00	0.00	51.20	3.44	1.26	0.00
11.20	0.96	0.02	0.04	52.00	3.44	1.26	0.00
12.00	1.65	0.22	**0.37**	52.80	3.44	1.26	0.00
12.80	2.48	0.64	**0.22**	53.60	3.44	1.26	0.00
13.60	2.69	0.76	0.11	54.40	3.44	1.26	0.00
14.40	2.82	0.84	0.08	55.20	3.44	1.26	0.00
15.20	2.92	0.91	0.06	56.00	3.44	1.26	0.00
16.00	2.99	0.96	0.05	56.80	3.44	1.26	0.00
16.80	3.06	1.00	0.05	57.60	3.44	1.26	0.00
17.60	3.12	1.04	0.04	58.40	3.44	1.26	0.00
18.40	3.17	1.07	0.03	59.20	3.44	1.26	0.00
19.20	3.22	1.10	0.03	60.00	3.44	1.26	0.00
20.00	3.26	1.13	0.03	60.80	3.44	1.26	0.00
20.80	3.30	1.16	0.03	61.60	3.44	1.26	0.00
21.60	3.34	1.19	0.03	62.40	3.44	1.26	0.00
22.40	3.38	1.21	0.03	63.20	3.44	1.26	0.00
23.20	3.41	1.24	0.02	64.00	3.44	1.26	0.00
24.00	**3.44**	**1.26**	0.02	64.80	3.44	1.26	0.00
24.80	3.44	1.26	0.00	65.60	3.44	1.26	0.00
25.60	3.44	1.26	0.00	66.40	3.44	1.26	0.00
26.40	3.44	1.26	0.00	67.20	3.44	1.26	0.00
27.20	3.44	1.26	0.00	68.00	3.44	1.26	0.00
28.00	3.44	1.26	0.00	68.80	3.44	1.26	0.00
28.80	3.44	1.26	0.00	69.60	3.44	1.26	0.00
29.60	3.44	1.26	0.00	70.40	3.44	1.26	0.00
30.40	3.44	1.26	0.00	71.20	3.44	1.26	0.00
31.20	3.44	1.26	0.00	72.00	3.44	1.26	0.00
32.00	3.44	1.26	0.00	72.80	3.44	1.26	0.00
32.80	3.44	1.26	0.00	73.60	3.44	1.26	0.00
33.60	3.44	1.26	0.00	74.40	3.44	1.26	0.00
34.40	3.44	1.26	0.00	75.20	3.44	1.26	0.00
35.20	3.44	1.26	0.00	76.00	3.44	1.26	0.00
36.00	3.44	1.26	0.00	76.80	3.44	1.26	0.00
36.80	3.44	1.26	0.00	77.60	3.44	1.26	0.00
37.60	3.44	1.26	0.00	78.40	3.44	1.26	0.00
38.40	3.44	1.26	0.00	79.20	3.44	1.26	0.00
39.20	3.44	1.26	0.00	80.00	3.44	1.26	0.00
40.00	3.44	1.26	0.00				

Summary for Subcatchment 53S: Basin 9 - Imp

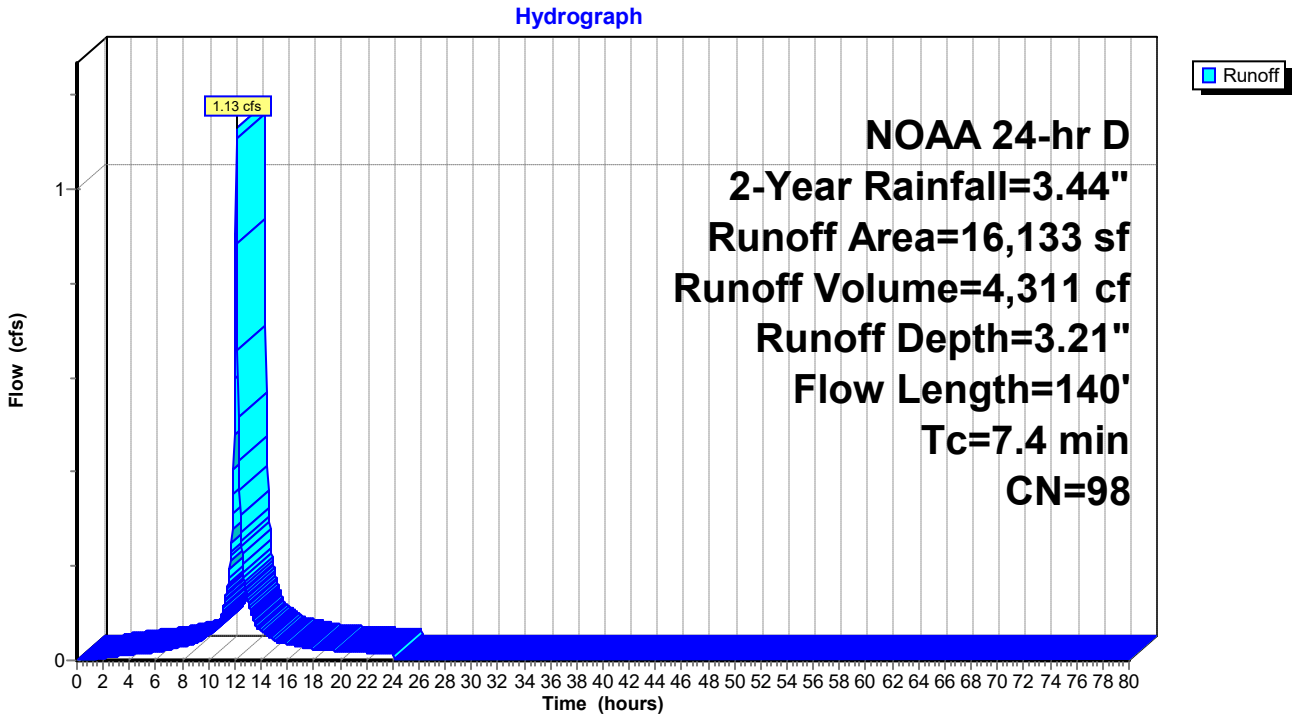
Runoff = 1.13 cfs @ 12.14 hrs, Volume= 4,311 cf, Depth= 3.21"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
6,889	98	Paved parking, HSG D
9,244	98	Paved parking, HSG C
16,133	98	Weighted Average
16,133		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 53S: Basin 9 - Imp



Hydrograph for Subcatchment 53S: Basin 9 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	3.21	0.00
0.80	0.03	0.00	0.00	41.60	3.44	3.21	0.00
1.60	0.06	0.00	0.00	42.40	3.44	3.21	0.00
2.40	0.10	0.01	0.01	43.20	3.44	3.21	0.00
3.20	0.14	0.03	0.01	44.00	3.44	3.21	0.00
4.00	0.18	0.06	0.01	44.80	3.44	3.21	0.00
4.80	0.22	0.09	0.01	45.60	3.44	3.21	0.00
5.60	0.27	0.12	0.02	46.40	3.44	3.21	0.00
6.40	0.32	0.16	0.02	47.20	3.44	3.21	0.00
7.20	0.38	0.21	0.02	48.00	3.44	3.21	0.00
8.00	0.45	0.27	0.03	48.80	3.44	3.21	0.00
8.80	0.52	0.34	0.03	49.60	3.44	3.21	0.00
9.60	0.62	0.43	0.05	50.40	3.44	3.21	0.00
10.40	0.75	0.55	0.06	51.20	3.44	3.21	0.00
11.20	0.96	0.75	0.12	52.00	3.44	3.21	0.00
12.00	1.65	1.43	**0.60**	52.80	3.44	3.21	0.00
12.80	2.48	2.25	**0.15**	53.60	3.44	3.21	0.00
13.60	2.69	2.46	0.07	54.40	3.44	3.21	0.00
14.40	2.82	2.59	0.05	55.20	3.44	3.21	0.00
15.20	2.92	2.68	0.04	56.00	3.44	3.21	0.00
16.00	2.99	2.76	0.03	56.80	3.44	3.21	0.00
16.80	3.06	2.83	0.03	57.60	3.44	3.21	0.00
17.60	3.12	2.89	0.03	58.40	3.44	3.21	0.00
18.40	3.17	2.94	0.02	59.20	3.44	3.21	0.00
19.20	3.22	2.98	0.02	60.00	3.44	3.21	0.00
20.00	3.26	3.03	0.02	60.80	3.44	3.21	0.00
20.80	3.30	3.07	0.02	61.60	3.44	3.21	0.00
21.60	3.34	3.11	0.02	62.40	3.44	3.21	0.00
22.40	3.38	3.14	0.02	63.20	3.44	3.21	0.00
23.20	3.41	3.18	0.02	64.00	3.44	3.21	0.00
24.00	**3.44**	**3.21**	0.01	64.80	3.44	3.21	0.00
24.80	3.44	3.21	0.00	65.60	3.44	3.21	0.00
25.60	3.44	3.21	0.00	66.40	3.44	3.21	0.00
26.40	3.44	3.21	0.00	67.20	3.44	3.21	0.00
27.20	3.44	3.21	0.00	68.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00	68.80	3.44	3.21	0.00
28.80	3.44	3.21	0.00	69.60	3.44	3.21	0.00
29.60	3.44	3.21	0.00	70.40	3.44	3.21	0.00
30.40	3.44	3.21	0.00	71.20	3.44	3.21	0.00
31.20	3.44	3.21	0.00	72.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00	72.80	3.44	3.21	0.00
32.80	3.44	3.21	0.00	73.60	3.44	3.21	0.00
33.60	3.44	3.21	0.00	74.40	3.44	3.21	0.00
34.40	3.44	3.21	0.00	75.20	3.44	3.21	0.00
35.20	3.44	3.21	0.00	76.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00	76.80	3.44	3.21	0.00
36.80	3.44	3.21	0.00	77.60	3.44	3.21	0.00
37.60	3.44	3.21	0.00	78.40	3.44	3.21	0.00
38.40	3.44	3.21	0.00	79.20	3.44	3.21	0.00
39.20	3.44	3.21	0.00	80.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00				

Summary for Subcatchment 54S: Basin 9 - Perv

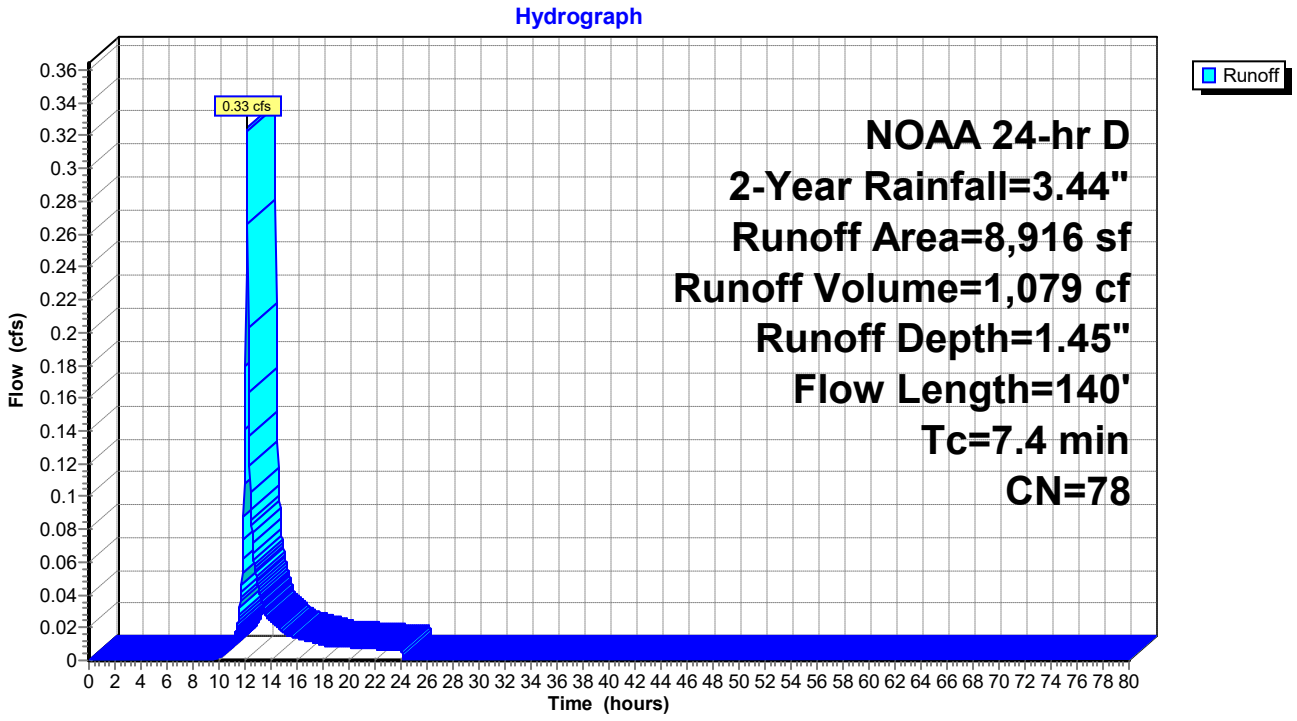
Runoff = 0.33 cfs @ 12.15 hrs, Volume= 1,079 cf, Depth= 1.45"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
2,537	74	>75% Grass cover, Good, HSG C
6,379	80	>75% Grass cover, Good, HSG D
8,916	78	Weighted Average
8,916		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 54S: Basin 9 - Perv



Hydrograph for Subcatchment 54S: Basin 9 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	3.44	1.45	0.00
0.80	0.03	0.00	0.00	41.60	3.44	1.45	0.00
1.60	0.06	0.00	0.00	42.40	3.44	1.45	0.00
2.40	0.10	0.00	0.00	43.20	3.44	1.45	0.00
3.20	0.14	0.00	0.00	44.00	3.44	1.45	0.00
4.00	0.18	0.00	0.00	44.80	3.44	1.45	0.00
4.80	0.22	0.00	0.00	45.60	3.44	1.45	0.00
5.60	0.27	0.00	0.00	46.40	3.44	1.45	0.00
6.40	0.32	0.00	0.00	47.20	3.44	1.45	0.00
7.20	0.38	0.00	0.00	48.00	3.44	1.45	0.00
8.00	0.45	0.00	0.00	48.80	3.44	1.45	0.00
8.80	0.52	0.00	0.00	49.60	3.44	1.45	0.00
9.60	0.62	0.00	0.00	50.40	3.44	1.45	0.00
10.40	0.75	0.01	0.00	51.20	3.44	1.45	0.00
11.20	0.96	0.05	0.01	52.00	3.44	1.45	0.00
12.00	1.65	0.30	**0.14**	52.80	3.44	1.45	0.00
12.80	2.48	0.77	**0.05**	53.60	3.44	1.45	0.00
13.60	2.69	0.91	0.03	54.40	3.44	1.45	0.00
14.40	2.82	1.00	0.02	55.20	3.44	1.45	0.00
15.20	2.92	1.07	0.02	56.00	3.44	1.45	0.00
16.00	2.99	1.12	0.01	56.80	3.44	1.45	0.00
16.80	3.06	1.17	0.01	57.60	3.44	1.45	0.00
17.60	3.12	1.22	0.01	58.40	3.44	1.45	0.00
18.40	3.17	1.25	0.01	59.20	3.44	1.45	0.00
19.20	3.22	1.29	0.01	60.00	3.44	1.45	0.00
20.00	3.26	1.32	0.01	60.80	3.44	1.45	0.00
20.80	3.30	1.35	0.01	61.60	3.44	1.45	0.00
21.60	3.34	1.38	0.01	62.40	3.44	1.45	0.00
22.40	3.38	1.40	0.01	63.20	3.44	1.45	0.00
23.20	3.41	1.43	0.01	64.00	3.44	1.45	0.00
24.00	**3.44**	**1.45**	0.01	64.80	3.44	1.45	0.00
24.80	3.44	1.45	0.00	65.60	3.44	1.45	0.00
25.60	3.44	1.45	0.00	66.40	3.44	1.45	0.00
26.40	3.44	1.45	0.00	67.20	3.44	1.45	0.00
27.20	3.44	1.45	0.00	68.00	3.44	1.45	0.00
28.00	3.44	1.45	0.00	68.80	3.44	1.45	0.00
28.80	3.44	1.45	0.00	69.60	3.44	1.45	0.00
29.60	3.44	1.45	0.00	70.40	3.44	1.45	0.00
30.40	3.44	1.45	0.00	71.20	3.44	1.45	0.00
31.20	3.44	1.45	0.00	72.00	3.44	1.45	0.00
32.00	3.44	1.45	0.00	72.80	3.44	1.45	0.00
32.80	3.44	1.45	0.00	73.60	3.44	1.45	0.00
33.60	3.44	1.45	0.00	74.40	3.44	1.45	0.00
34.40	3.44	1.45	0.00	75.20	3.44	1.45	0.00
35.20	3.44	1.45	0.00	76.00	3.44	1.45	0.00
36.00	3.44	1.45	0.00	76.80	3.44	1.45	0.00
36.80	3.44	1.45	0.00	77.60	3.44	1.45	0.00
37.60	3.44	1.45	0.00	78.40	3.44	1.45	0.00
38.40	3.44	1.45	0.00	79.20	3.44	1.45	0.00
39.20	3.44	1.45	0.00	80.00	3.44	1.45	0.00
40.00	3.44	1.45	0.00				

Summary for Pond 21P: Basin 3

Inflow Area = 51,670 sf, 62.76% Impervious, Inflow Depth = 2.46" for 2-Year event
Inflow = 2.77 cfs @ 12.15 hrs, Volume= 10,588 cf
Outflow = 1.87 cfs @ 12.25 hrs, Volume= 10,588 cf, Atten= 32%, Lag= 5.5 min
Discarded = 1.21 cfs @ 12.00 hrs, Volume= 10,212 cf
Primary = 0.66 cfs @ 12.25 hrs, Volume= 376 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 559.36' @ 12.25 hrs Surf.Area= 5,227 sf Storage= 748 cf

Plug-Flow detention time= 2.0 min calculated for 10,582 cf (100% of inflow)
Center-of-Mass det. time= 2.0 min (781.5 - 779.5)

Volume	Invert	Avail.Storage	Storage Description
#1	559.00'	4,537 cf	**Custom Stage Data (Prismatic)** Listed below 11,343 cf Overall x 40.0% Voids

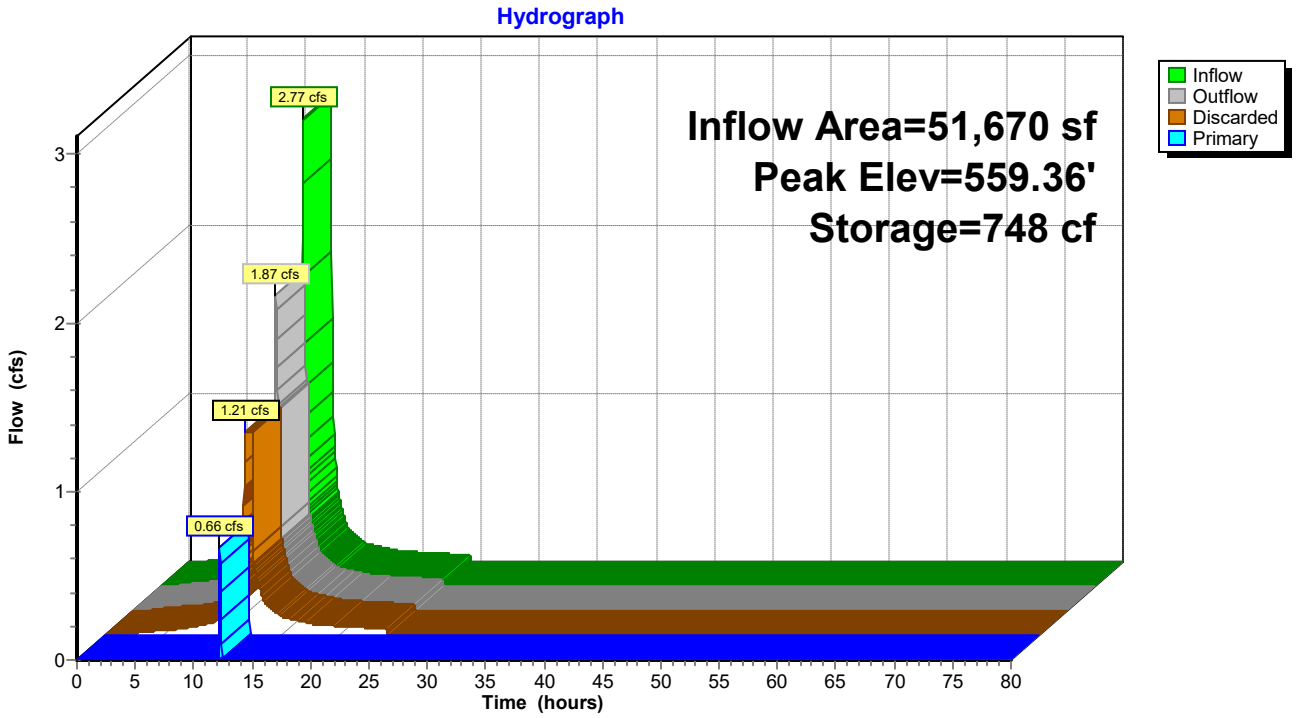
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
559.00	5,227	0	0
560.00	5,227	5,227	5,227
561.00	5,227	5,227	10,454
561.17	5,227	889	11,343

Device	Routing	Invert	Outlet Devices
#1	Primary	559.22'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	559.00'	**10.000 in/hr Exfiltration over Surface area**

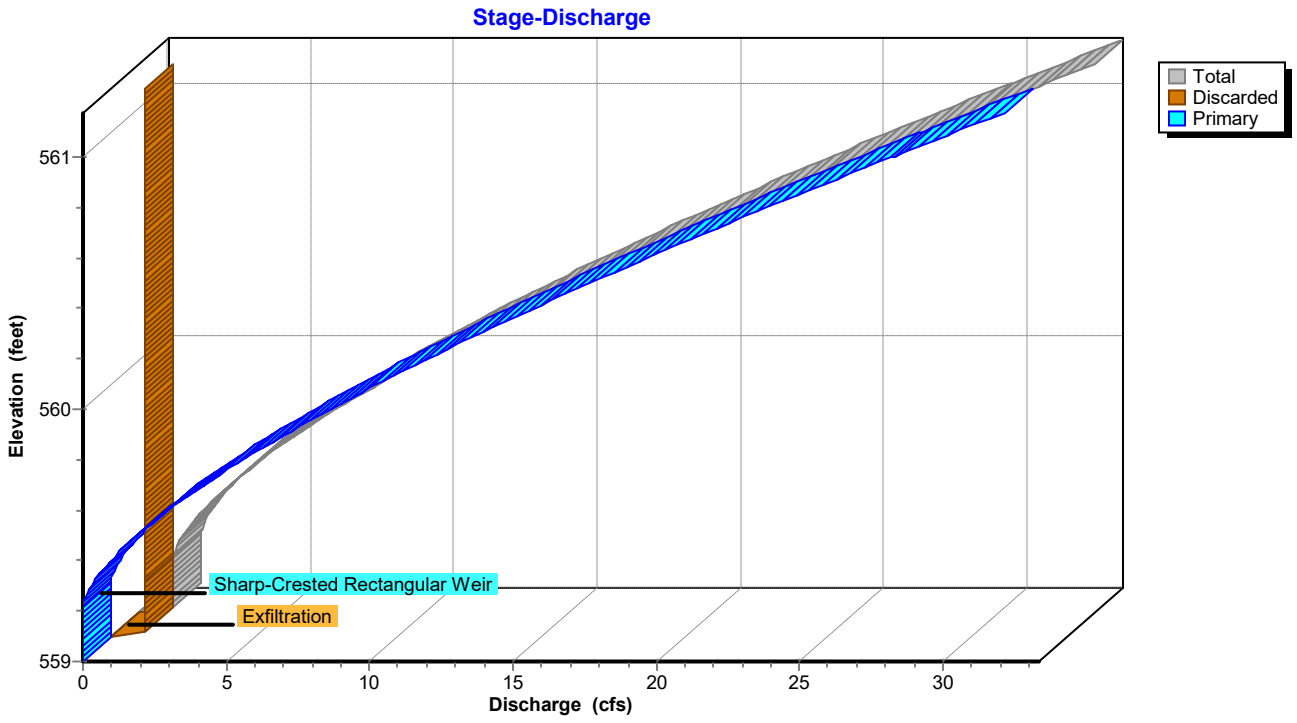
Discarded OutFlow Max=1.21 cfs @ 12.00 hrs HW=559.02' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.21 cfs)

Primary OutFlow Max=0.65 cfs @ 12.25 hrs HW=559.36' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.65 cfs @ 1.20 fps)

Pond 21P: Basin 3



Pond 21P: Basin 3



Hydrograph for Pond 21P: Basin 3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	559.00	0.00	0.00	0.00
2.00	0.01	0	559.00	0.01	0.01	0.00
4.00	0.02	1	559.00	0.02	0.02	0.00
6.00	0.04	1	559.00	0.04	0.04	0.00
8.00	0.06	2	559.00	0.06	0.06	0.00
10.00	0.11	4	559.00	0.11	0.11	0.00
12.00	**1.34**	**52**	**559.02**	**1.21**	**1.21**	**0.00**
14.00	**0.17**	**6**	**559.00**	**0.17**	0.17	**0.00**
16.00	0.10	4	559.00	0.10	0.10	0.00
18.00	0.07	2	559.00	0.07	0.07	0.00
20.00	0.06	2	559.00	0.06	0.06	0.00
22.00	0.05	2	559.00	0.05	0.05	0.00
24.00	0.04	2	559.00	0.04	0.04	0.00
26.00	0.00	0	559.00	0.00	0.00	0.00
28.00	0.00	0	559.00	0.00	0.00	0.00
30.00	0.00	0	559.00	0.00	0.00	0.00
32.00	0.00	0	559.00	0.00	0.00	0.00
34.00	0.00	0	559.00	0.00	0.00	0.00
36.00	0.00	0	559.00	0.00	0.00	0.00
38.00	0.00	0	559.00	0.00	0.00	0.00
40.00	0.00	0	559.00	0.00	0.00	0.00
42.00	0.00	0	559.00	0.00	0.00	0.00
44.00	0.00	0	559.00	0.00	0.00	0.00
46.00	0.00	0	559.00	0.00	0.00	0.00
48.00	0.00	0	559.00	0.00	0.00	0.00
50.00	0.00	0	559.00	0.00	0.00	0.00
52.00	0.00	0	559.00	0.00	0.00	0.00
54.00	0.00	0	559.00	0.00	0.00	0.00
56.00	0.00	0	559.00	0.00	0.00	0.00
58.00	0.00	0	559.00	0.00	0.00	0.00
60.00	0.00	0	559.00	0.00	0.00	0.00
62.00	0.00	0	559.00	0.00	0.00	0.00
64.00	0.00	0	559.00	0.00	0.00	0.00
66.00	0.00	0	559.00	0.00	0.00	0.00
68.00	0.00	0	559.00	0.00	0.00	0.00
70.00	0.00	0	559.00	0.00	0.00	0.00
72.00	0.00	0	559.00	0.00	0.00	0.00
74.00	0.00	0	559.00	0.00	0.00	0.00
76.00	0.00	0	559.00	0.00	0.00	0.00
78.00	0.00	0	559.00	0.00	0.00	0.00
80.00	0.00	0	559.00	0.00	0.00	0.00

Stage-Discharge for Pond 21P: Basin 3

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
559.00	0.00	**0.00**	0.00
559.05	1.21	**1.21**	0.00
559.10	1.21	1.21	0.00
559.15	1.21	1.21	0.00
559.20	1.21	1.21	0.00
559.25	1.28	1.21	0.07
559.30	1.50	1.21	0.29
559.35	1.82	1.21	0.61
559.40	2.20	1.21	0.99
559.45	2.64	1.21	1.43
559.50	3.12	1.21	1.91
559.55	3.65	1.21	2.44
559.60	4.22	1.21	3.01
559.65	4.82	1.21	3.61
559.70	5.46	1.21	4.25
559.75	6.12	1.21	4.91
559.80	6.82	1.21	5.61
559.85	7.54	1.21	6.33
559.90	8.30	1.21	7.09
559.95	9.07	1.21	7.86
560.00	9.87	1.21	8.66
560.05	10.69	1.21	9.48
560.10	11.53	1.21	10.32
560.15	12.40	1.21	11.19
560.20	13.28	1.21	12.07
560.25	14.18	1.21	12.97
560.30	15.10	1.21	13.89
560.35	16.03	1.21	14.82
560.40	16.99	1.21	15.78
560.45	17.96	1.21	16.75
560.50	18.94	1.21	17.73
560.55	19.94	1.21	18.73
560.60	20.95	1.21	19.74
560.65	21.98	1.21	20.77
560.70	23.02	1.21	21.81
560.75	24.07	1.21	22.86
560.80	25.14	1.21	23.93
560.85	26.21	1.21	25.00
560.90	27.30	1.21	26.09
560.95	28.40	1.21	27.19
561.00	29.51	1.21	28.30
561.05	30.63	1.21	29.42
561.10	31.76	1.21	30.55
561.15	**32.90**	1.21	**31.69**

Stage-Area-Storage for Pond 21P: Basin 3

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
559.00	**5,227**	0
559.05	5,227	105
559.10	5,227	209
559.15	5,227	314
559.20	5,227	418
559.25	5,227	523
559.30	5,227	627
559.35	5,227	732
559.40	5,227	836
559.45	5,227	941
559.50	5,227	1,045
559.55	5,227	1,150
559.60	5,227	1,254
559.65	5,227	1,359
559.70	5,227	1,464
559.75	5,227	1,568
559.80	5,227	1,673
559.85	5,227	1,777
559.90	5,227	1,882
559.95	5,227	1,986
560.00	5,227	2,091
560.05	5,227	2,195
560.10	5,227	2,300
560.15	5,227	2,404
560.20	5,227	2,509
560.25	5,227	2,614
560.30	5,227	2,718
560.35	5,227	2,823
560.40	5,227	2,927
560.45	5,227	3,032
560.50	5,227	3,136
560.55	5,227	3,241
560.60	5,227	3,345
560.65	5,227	3,450
560.70	5,227	3,554
560.75	5,227	3,659
560.80	5,227	3,763
560.85	5,227	3,868
560.90	5,227	3,973
560.95	5,227	4,077
561.00	5,227	4,182
561.05	5,227	4,286
561.10	5,227	4,391
561.15	5,227	**4,495**

Summary for Pond 22P: Basin 4

Inflow Area = 57,587 sf, 86.93% Impervious, Inflow Depth = 2.94" for 2-Year event
Inflow = 4.01 cfs @ 12.12 hrs, Volume= 14,129 cf
Outflow = 1.13 cfs @ 11.92 hrs, Volume= 14,129 cf, Atten= 72%, Lag= 0.0 min
Discarded = 1.13 cfs @ 11.92 hrs, Volume= 14,129 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 572.43' @ 12.34 hrs Surf.Area= 12,197 sf Storage= 2,074 cf

Plug-Flow detention time= 8.6 min calculated for 14,122 cf (100% of inflow)
Center-of-Mass det. time= 8.6 min (770.9 - 762.3)

Volume	Invert	Avail.Storage	Storage Description
#1	572.00'	14,197 cf	**Custom Stage Data (Prismatic)** Listed below 35,493 cf Overall x 40.0% Voids

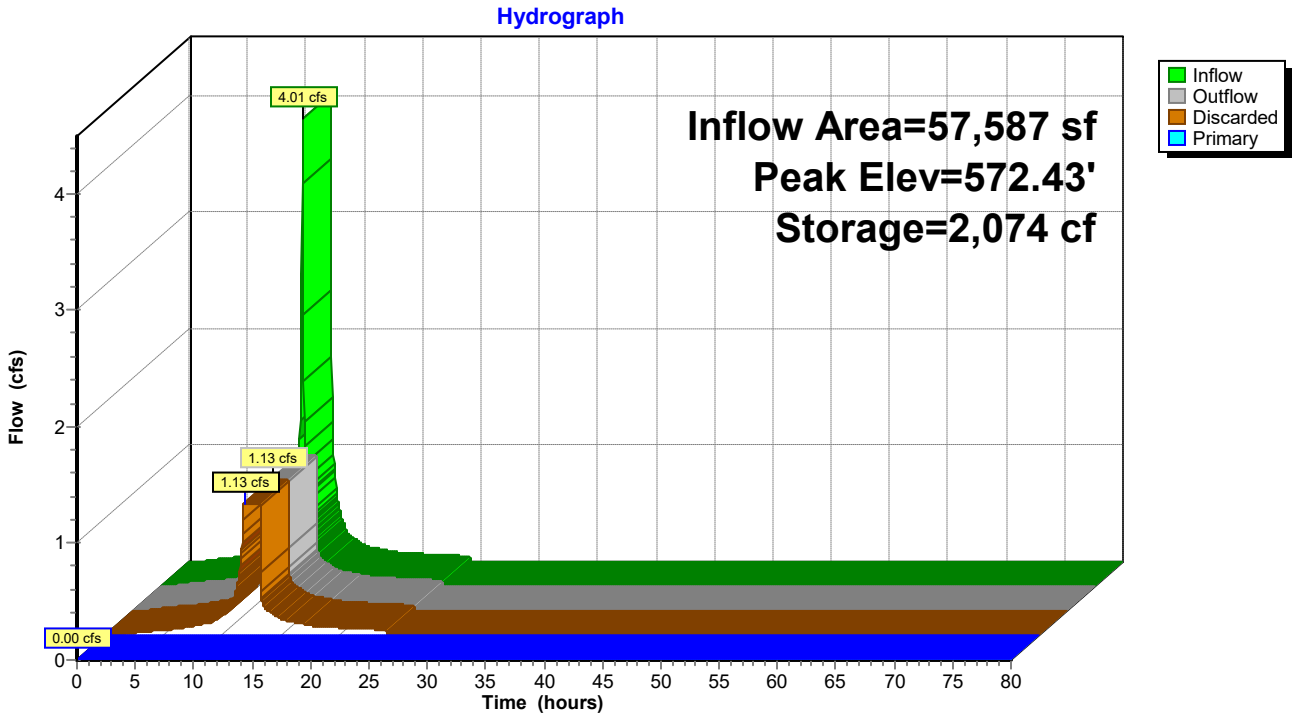
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
572.00	12,197	0	0
573.00	12,197	12,197	12,197
574.00	12,197	12,197	24,394
574.91	12,197	11,099	35,493

Device	Routing	Invert	Outlet Devices
#1	Primary	574.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	572.50'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	572.00'	**4.000 in/hr Exfiltration over Surface area**

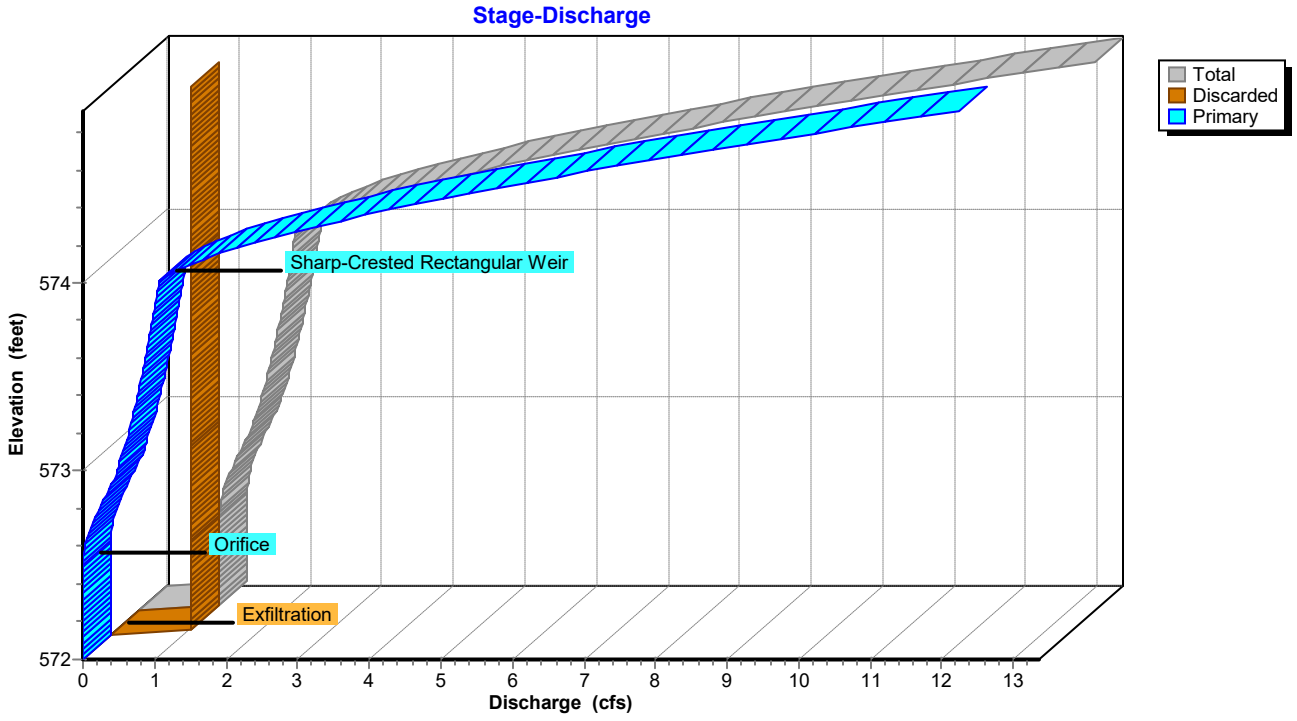
Discarded OutFlow Max=1.13 cfs @ 11.92 hrs HW=572.04' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.13 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=572.00' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Controls 0.00 cfs)

Pond 22P: Basin 4



Pond 22P: Basin 4



Hydrograph for Pond 22P: Basin 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	572.00	0.00	0.00	**0.00**
2.00	0.01	2	572.00	0.01	0.01	0.00
4.00	0.04	5	572.00	0.04	0.04	0.00
6.00	0.06	7	572.00	0.06	0.06	0.00
8.00	0.09	12	572.00	0.09	0.09	0.00
10.00	0.17	21	572.00	**0.17**	**0.17**	0.00
12.00	**2.25**	**370**	**572.08**	**1.13**	**1.13**	0.00
14.00	**0.21**	**27**	**572.01**	0.21	0.21	0.00
16.00	0.12	15	572.00	0.12	0.12	0.00
18.00	0.08	10	572.00	0.08	0.08	0.00
20.00	0.07	8	572.00	0.07	0.07	0.00
22.00	0.06	7	572.00	0.06	0.06	0.00
24.00	0.05	6	572.00	0.05	0.05	0.00
26.00	0.00	0	572.00	0.00	0.00	0.00
28.00	0.00	0	572.00	0.00	0.00	0.00
30.00	0.00	0	572.00	0.00	0.00	0.00
32.00	0.00	0	572.00	0.00	0.00	0.00
34.00	0.00	0	572.00	0.00	0.00	0.00
36.00	0.00	0	572.00	0.00	0.00	0.00
38.00	0.00	0	572.00	0.00	0.00	0.00
40.00	0.00	0	572.00	0.00	0.00	0.00
42.00	0.00	0	572.00	0.00	0.00	0.00
44.00	0.00	0	572.00	0.00	0.00	0.00
46.00	0.00	0	572.00	0.00	0.00	0.00
48.00	0.00	0	572.00	0.00	0.00	0.00
50.00	0.00	0	572.00	0.00	0.00	0.00
52.00	0.00	0	572.00	0.00	0.00	0.00
54.00	0.00	0	572.00	0.00	0.00	0.00
56.00	0.00	0	572.00	0.00	0.00	0.00
58.00	0.00	0	572.00	0.00	0.00	0.00
60.00	0.00	0	572.00	0.00	0.00	0.00
62.00	0.00	0	572.00	0.00	0.00	0.00
64.00	0.00	0	572.00	0.00	0.00	0.00
66.00	0.00	0	572.00	0.00	0.00	0.00
68.00	0.00	0	572.00	0.00	0.00	0.00
70.00	0.00	0	572.00	0.00	0.00	0.00
72.00	0.00	0	572.00	0.00	0.00	0.00
74.00	0.00	0	572.00	0.00	0.00	0.00
76.00	0.00	0	572.00	0.00	0.00	0.00
78.00	0.00	0	572.00	0.00	0.00	0.00
80.00	0.00	0	572.00	0.00	0.00	0.00

Stage-Discharge for Pond 22P: Basin 4

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
572.00	0.00	**0.00**	0.00
572.05	1.13	**1.13**	0.00
572.10	1.13	1.13	0.00
572.15	1.13	1.13	0.00
572.20	1.13	1.13	0.00
572.25	1.13	1.13	0.00
572.30	1.13	1.13	0.00
572.35	1.13	1.13	0.00
572.40	1.13	1.13	0.00
572.45	1.13	1.13	0.00
572.50	1.13	1.13	0.00
572.55	1.14	1.13	0.01
572.60	1.16	1.13	0.03
572.65	1.19	1.13	0.07
572.70	1.24	1.13	0.11
572.75	1.30	1.13	0.17
572.80	1.36	1.13	0.23
572.85	1.43	1.13	0.30
572.90	1.49	1.13	0.36
572.95	1.55	1.13	0.43
573.00	1.60	1.13	0.47
573.05	1.65	1.13	0.52
573.10	1.69	1.13	0.56
573.15	1.73	1.13	0.60
573.20	1.76	1.13	0.63
573.25	1.80	1.13	0.67
573.30	1.83	1.13	0.70
573.35	1.86	1.13	0.73
573.40	1.89	1.13	0.76
573.45	1.92	1.13	0.79
573.50	1.95	1.13	0.82
573.55	1.97	1.13	0.85
573.60	2.00	1.13	0.87
573.65	2.03	1.13	0.90
573.70	2.05	1.13	0.92
573.75	2.07	1.13	0.95
573.80	2.10	1.13	0.97
573.85	2.12	1.13	0.99
573.90	2.14	1.13	1.01
573.95	2.17	1.13	1.04
574.00	2.19	1.13	1.06
574.05	2.35	1.13	1.22
574.10	2.64	1.13	1.51
574.15	3.00	1.13	1.87
574.20	3.43	1.13	2.30
574.25	3.90	1.13	2.77
574.30	4.42	1.13	3.29
574.35	4.99	1.13	3.86
574.40	5.59	1.13	4.46
574.45	6.22	1.13	5.09
574.50	6.89	1.13	5.76
574.55	7.59	1.13	6.46
574.60	8.31	1.13	7.18
574.65	9.06	1.13	7.93
574.70	9.84	1.13	8.71
574.75	10.64	1.13	9.51
574.80	11.47	1.13	10.34
574.85	12.31	1.13	11.18
574.90	**13.18**	1.13	**12.05**

Stage-Area-Storage for Pond 22P: Basin 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
572.00	**12,197**	0
572.05	12,197	244
572.10	12,197	488
572.15	12,197	732
572.20	12,197	976
572.25	12,197	1,220
572.30	12,197	1,464
572.35	12,197	1,708
572.40	12,197	1,952
572.45	12,197	2,195
572.50	12,197	2,439
572.55	12,197	2,683
572.60	12,197	2,927
572.65	12,197	3,171
572.70	12,197	3,415
572.75	12,197	3,659
572.80	12,197	3,903
572.85	12,197	4,147
572.90	12,197	4,391
572.95	12,197	4,635
573.00	12,197	4,879
573.05	12,197	5,123
573.10	12,197	5,367
573.15	12,197	5,611
573.20	12,197	5,855
573.25	12,197	6,099
573.30	12,197	6,342
573.35	12,197	6,586
573.40	12,197	6,830
573.45	12,197	7,074
573.50	12,197	7,318
573.55	12,197	7,562
573.60	12,197	7,806
573.65	12,197	8,050
573.70	12,197	8,294
573.75	12,197	8,538
573.80	12,197	8,782
573.85	12,197	9,026
573.90	12,197	9,270
573.95	12,197	9,514
574.00	12,197	9,758
574.05	12,197	10,002
574.10	12,197	10,245
574.15	12,197	10,489
574.20	12,197	10,733
574.25	12,197	10,977
574.30	12,197	11,221
574.35	12,197	11,465
574.40	12,197	11,709
574.45	12,197	11,953
574.50	12,197	12,197
574.55	12,197	12,441
574.60	12,197	12,685
574.65	12,197	12,929
574.70	12,197	13,173
574.75	12,197	13,417
574.80	12,197	13,661
574.85	12,197	13,905
574.90	12,197	**14,149**

Summary for Pond 27P: Basin 2

Inflow Area = 217,925 sf, 51.70% Impervious, Inflow Depth = 0.99" for 2-Year event
Inflow = 4.89 cfs @ 12.20 hrs, Volume= 17,936 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 544.67' @ 24.64 hrs Surf.Area= 27,636 sf Storage= 17,936 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

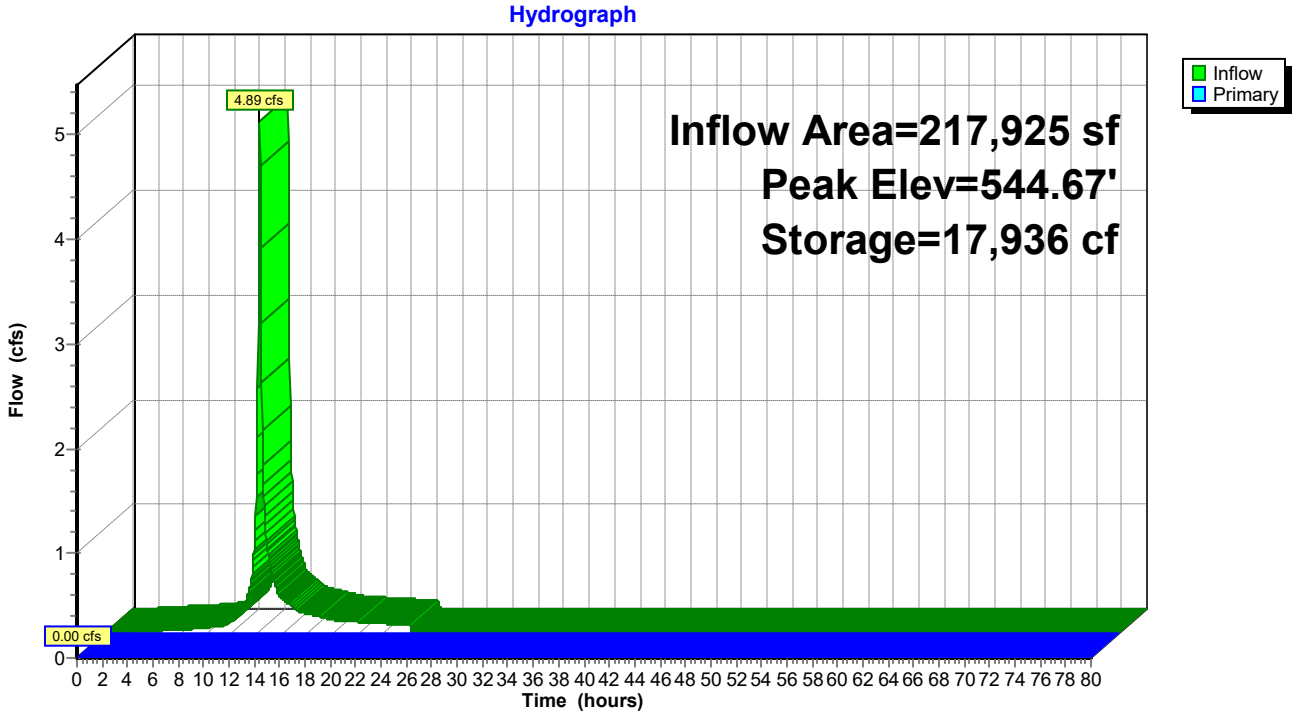
Volume	Invert	Avail.Storage	Storage Description
#1	544.00'	56,873 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
544.00	26,023	0	0
546.00	30,850	56,873	56,873

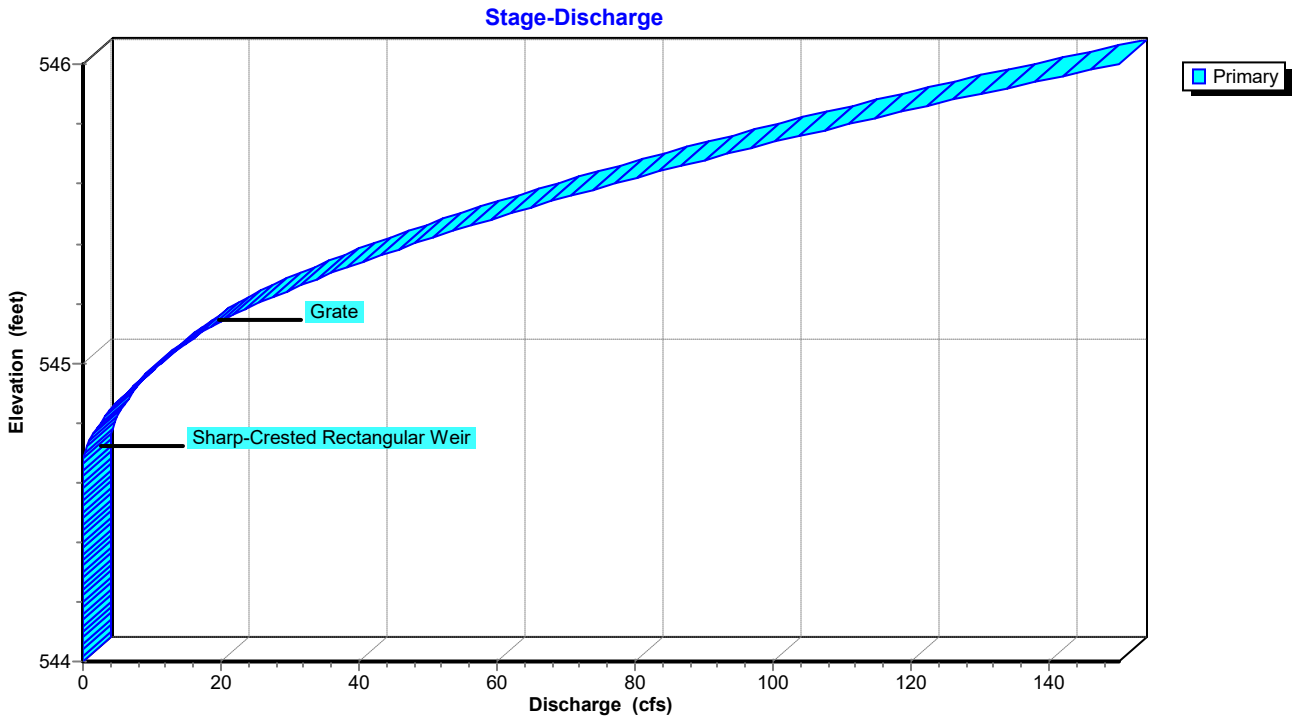
Device	Routing	Invert	Outlet Devices
#1	Primary	545.10'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	544.68'	**18.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.7' Crest Height

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=544.00' (Free Discharge)
1=Grate (Controls 0.00 cfs)
2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 27P: Basin 2



Pond 27P: Basin 2



Hydrograph for Pond 27P: Basin 2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	544.00	**0.00**
2.00	0.01	13	544.00	0.00
4.00	0.02	129	544.00	0.00
6.00	0.03	332	544.01	0.00
8.00	0.05	646	544.02	0.00
10.00	0.12	1,182	544.05	0.00
12.00	**1.88**	4,067	544.16	0.00
14.00	**0.33**	12,819	544.48	0.00
16.00	0.19	14,566	544.55	0.00
18.00	0.13	15,702	544.59	0.00
20.00	0.11	16,539	544.62	0.00
22.00	0.09	17,269	544.64	0.00
24.00	0.08	**17,890**	**544.67**	0.00
26.00	0.00	**17,936**	**544.67**	0.00
28.00	0.00	17,936	544.67	0.00
30.00	0.00	17,936	544.67	0.00
32.00	0.00	17,936	544.67	0.00
34.00	0.00	17,936	544.67	0.00
36.00	0.00	17,936	544.67	0.00
38.00	0.00	17,936	544.67	0.00
40.00	0.00	17,936	544.67	0.00
42.00	0.00	17,936	544.67	0.00
44.00	0.00	17,936	544.67	0.00
46.00	0.00	17,936	544.67	0.00
48.00	0.00	17,936	544.67	0.00
50.00	0.00	17,936	544.67	0.00
52.00	0.00	17,936	544.67	0.00
54.00	0.00	17,936	544.67	0.00
56.00	0.00	17,936	544.67	0.00
58.00	0.00	17,936	544.67	0.00
60.00	0.00	17,936	544.67	0.00
62.00	0.00	17,936	544.67	0.00
64.00	0.00	17,936	544.67	0.00
66.00	0.00	17,936	544.67	0.00
68.00	0.00	17,936	544.67	0.00
70.00	0.00	17,936	544.67	0.00
72.00	0.00	17,936	544.67	0.00
74.00	0.00	17,936	544.67	0.00
76.00	0.00	17,936	544.67	0.00
78.00	0.00	17,936	544.67	0.00
80.00	0.00	17,936	544.67	0.00

Stage-Discharge for Pond 27P: Basin 2

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
544.00	0.00	544.51	0.00	545.02	12.32	545.53	66.31
544.01	0.00	544.52	0.00	545.03	12.88	545.54	67.80
544.02	0.00	544.53	0.00	545.04	13.46	545.55	69.30
544.03	0.00	544.54	0.00	545.05	14.05	545.56	70.82
544.04	0.00	544.55	0.00	545.06	14.64	545.57	72.35
544.05	0.00	544.56	0.00	545.07	15.25	545.58	73.89
544.06	0.00	544.57	0.00	545.08	15.86	545.59	75.45
544.07	0.00	544.58	0.00	545.09	16.48	545.60	77.02
544.08	0.00	544.59	0.00	545.10	17.12	545.61	78.60
544.09	0.00	544.60	0.00	545.11	17.81	545.62	80.19
544.10	0.00	544.61	0.00	545.12	18.55	545.63	81.80
544.11	0.00	544.62	0.00	545.13	19.32	545.64	83.43
544.12	0.00	544.63	0.00	545.14	20.13	545.65	85.06
544.13	0.00	544.64	0.00	545.15	20.96	545.66	86.71
544.14	0.00	544.65	0.00	545.16	21.82	545.67	88.37
544.15	0.00	544.66	0.00	545.17	22.71	545.68	90.04
544.16	0.00	544.67	0.00	545.18	23.61	545.69	91.73
544.17	0.00	544.68	0.00	545.19	24.54	545.70	93.43
544.18	0.00	544.69	0.06	545.20	25.49	545.71	95.14
544.19	0.00	544.70	0.17	545.21	26.46	545.72	96.87
544.20	0.00	544.71	0.31	545.22	27.45	545.73	98.60
544.21	0.00	544.72	0.47	545.23	28.45	545.74	100.35
544.22	0.00	544.73	0.66	545.24	29.48	545.75	102.11
544.23	0.00	544.74	0.87	545.25	30.53	545.76	103.89
544.24	0.00	544.75	1.10	545.26	31.59	545.77	105.68
544.25	0.00	544.76	1.35	545.27	32.67	545.78	107.47
544.26	0.00	544.77	1.61	545.28	33.77	545.79	109.29
544.27	0.00	544.78	1.89	545.29	34.88	545.80	111.11
544.28	0.00	544.79	2.19	545.30	36.02	545.81	112.95
544.29	0.00	544.80	2.49	545.31	37.16	545.82	114.79
544.30	0.00	544.81	2.82	545.32	38.33	545.83	116.65
544.31	0.00	544.82	3.15	545.33	39.51	545.84	118.53
544.32	0.00	544.83	3.50	545.34	40.71	545.85	120.41
544.33	0.00	544.84	3.87	545.35	41.92	545.86	122.31
544.34	0.00	544.85	4.24	545.36	43.15	545.87	124.22
544.35	0.00	544.86	4.63	545.37	44.40	545.88	126.14
544.36	0.00	544.87	5.03	545.38	45.66	545.89	128.07
544.37	0.00	544.88	5.44	545.39	46.93	545.90	130.02
544.38	0.00	544.89	5.86	545.40	48.22	545.91	131.98
544.39	0.00	544.90	6.29	545.41	49.53	545.92	133.94
544.40	0.00	544.91	6.74	545.42	50.84	545.93	135.93
544.41	0.00	544.92	7.19	545.43	52.18	545.94	137.92
544.42	0.00	544.93	7.66	545.44	53.53	545.95	139.92
544.43	0.00	544.94	8.13	545.45	54.89	545.96	141.94
544.44	0.00	544.95	8.62	545.46	56.27	545.97	143.97
544.45	0.00	544.96	9.12	545.47	57.66	545.98	146.01
544.46	0.00	544.97	9.63	545.48	59.07	545.99	148.06
544.47	0.00	544.98	10.14	545.49	60.49	546.00	**150.12**
544.48	0.00	544.99	10.67	545.50	61.92		
544.49	0.00	545.00	11.21	545.51	63.37		
544.50	0.00	545.01	11.76	545.52	64.83		

Stage-Area-Storage for Pond 27P: Basin 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
544.00	26,023	0	545.02	28,485	27,799
544.02	26,071	521	545.04	28,533	28,369
544.04	26,120	1,043	545.06	28,581	28,940
544.06	26,168	1,566	545.08	28,630	29,512
544.08	26,216	2,090	545.10	28,678	30,085
544.10	26,264	2,614	545.12	28,726	30,660
544.12	26,313	3,140	545.14	28,774	31,235
544.14	26,361	3,667	545.16	28,823	31,810
544.16	26,409	4,195	545.18	28,871	32,387
544.18	26,457	4,723	545.20	28,919	32,965
544.20	26,506	5,253	545.22	28,967	33,544
544.22	26,554	5,783	545.24	29,016	34,124
544.24	26,602	6,315	545.26	29,064	34,705
544.26	26,651	6,848	545.28	29,112	35,287
544.28	26,699	7,381	545.30	29,161	35,869
544.30	26,747	7,916	545.32	29,209	36,453
544.32	26,795	8,451	545.34	29,257	37,038
544.34	26,844	8,987	545.36	29,305	37,623
544.36	26,892	9,525	545.38	29,354	38,210
544.38	26,940	10,063	545.40	29,402	38,797
544.40	26,988	10,602	545.42	29,450	39,386
544.42	27,037	11,143	545.44	29,498	39,975
544.44	27,085	11,684	545.46	29,547	40,566
544.46	27,133	12,226	545.48	29,595	41,157
544.48	27,181	12,769	545.50	29,643	41,750
544.50	27,230	13,313	545.52	29,692	42,343
544.52	27,278	13,858	545.54	29,740	42,937
544.54	27,326	14,404	545.56	29,788	43,533
544.56	27,375	14,951	545.58	29,836	44,129
544.58	27,423	15,499	545.60	29,885	44,726
544.60	27,471	16,048	545.62	29,933	45,324
544.62	27,519	16,598	545.64	29,981	45,923
544.64	27,568	17,149	545.66	30,029	46,524
544.66	27,616	17,701	545.68	30,078	47,125
544.68	27,664	18,254	545.70	30,126	47,727
544.70	27,712	18,807	545.72	30,174	48,330
544.72	27,761	19,362	545.74	30,222	48,934
544.74	27,809	19,918	545.76	30,271	49,539
544.76	27,857	20,474	545.78	30,319	50,144
544.78	27,906	21,032	545.80	30,367	50,751
544.80	27,954	21,591	545.82	30,416	51,359
544.82	28,002	22,150	545.84	30,464	51,968
544.84	28,050	22,711	545.86	30,512	52,578
544.86	28,099	23,272	545.88	30,560	53,188
544.88	28,147	23,835	545.90	30,609	53,800
544.90	28,195	24,398	545.92	30,657	54,413
544.92	28,243	24,963	545.94	30,705	55,026
544.94	28,292	25,528	545.96	30,753	55,641
544.96	28,340	26,094	545.98	30,802	56,256
544.98	28,388	26,662	546.00	**30,850**	**56,873**
545.00	28,437	27,230			

Summary for Pond 33P: Basin 11

Inflow Area = 84,693 sf, 77.02% Impervious, Inflow Depth = 2.76" for 2-Year event
Inflow = 4.79 cfs @ 12.17 hrs, Volume= 19,474 cf
Outflow = 3.31 cfs @ 12.27 hrs, Volume= 19,474 cf, Atten= 31%, Lag= 5.9 min
Discarded = 3.13 cfs @ 12.08 hrs, Volume= 19,398 cf
Primary = 0.18 cfs @ 12.27 hrs, Volume= 76 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 590.15' @ 12.27 hrs Surf.Area= 13,504 sf Storage= 811 cf

Plug-Flow detention time= 1.1 min calculated for 19,464 cf (100% of inflow)
Center-of-Mass det. time= 1.1 min (773.0 - 771.8)

Volume	Invert	Avail.Storage	Storage Description
#1	590.00'	13,072 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 32,680 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
590.00	13,504	0	0
591.00	13,504	13,504	13,504
592.00	13,504	13,504	27,008
592.42	13,504	5,672	32,680

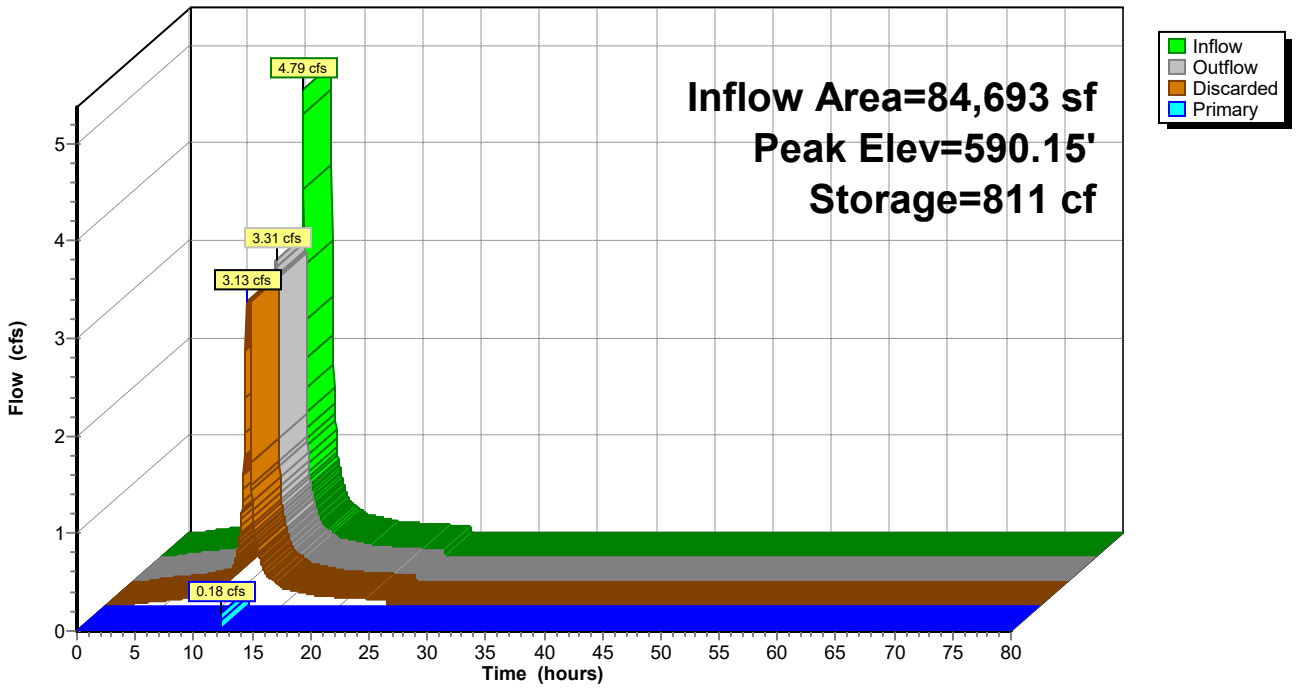
Device	Routing	Invert	Outlet Devices
#1	Primary	590.10'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	590.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=3.13 cfs @ 12.08 hrs HW=590.03' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 3.13 cfs)

Primary OutFlow Max=0.17 cfs @ 12.27 hrs HW=590.15' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.17 cfs @ 0.72 fps)

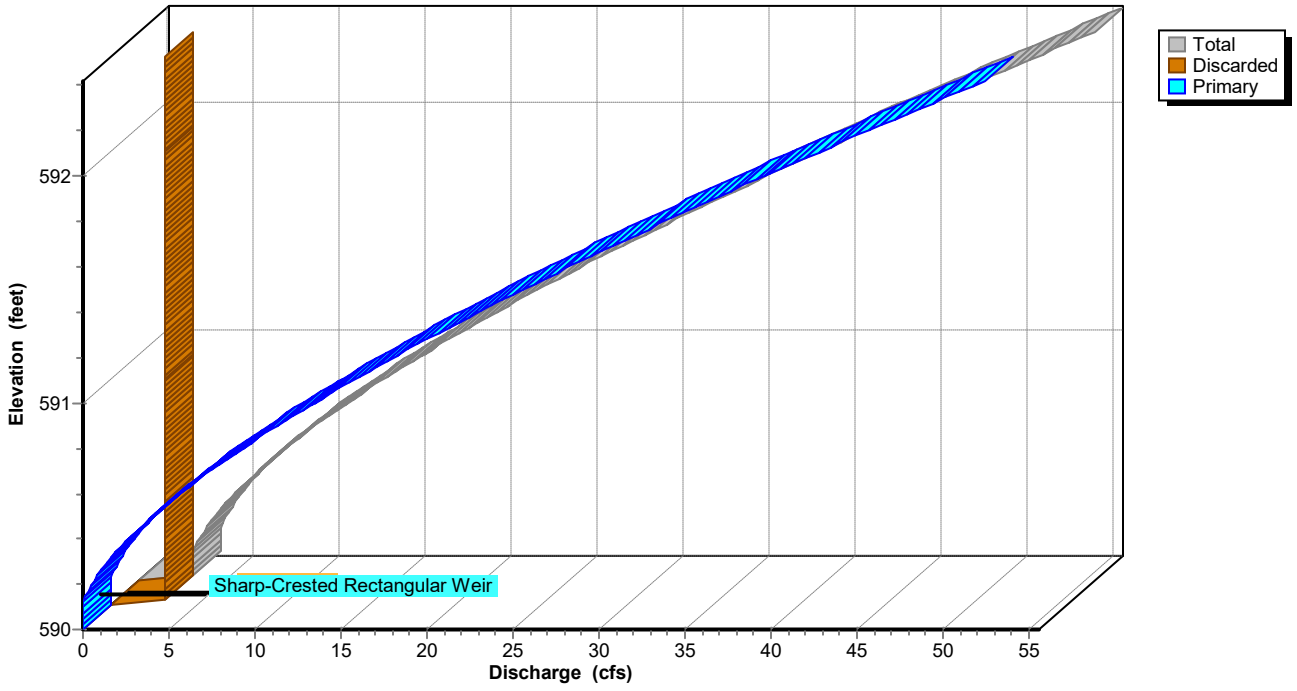
Pond 33P: Basin 11

Hydrograph



Pond 33P: Basin 11

Stage-Discharge



Hydrograph for Pond 33P: Basin 11

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	590.00	0.00	0.00	0.00
2.00	0.02	1	590.00	0.02	0.02	0.00
4.00	0.05	2	590.00	0.05	0.05	0.00
6.00	0.07	3	590.00	0.07	0.07	0.00
8.00	0.12	5	590.00	0.12	0.12	0.00
10.00	0.22	9	590.00	0.22	0.22	0.00
12.00	**2.27**	**89**	**590.02**	**2.14**	**2.14**	**0.00**
14.00	**0.31**	**13**	**590.00**	**0.31**	**0.31**	**0.00**
16.00	0.17	7	590.00	0.17	0.17	0.00
18.00	0.11	5	590.00	0.11	0.11	0.00
20.00	0.10	4	590.00	0.10	0.10	0.00
22.00	0.08	3	590.00	0.08	0.08	0.00
24.00	0.07	3	590.00	0.07	0.07	0.00
26.00	0.00	0	590.00	0.00	0.00	0.00
28.00	0.00	0	590.00	0.00	0.00	0.00
30.00	0.00	0	590.00	0.00	0.00	0.00
32.00	0.00	0	590.00	0.00	0.00	0.00
34.00	0.00	0	590.00	0.00	0.00	0.00
36.00	0.00	0	590.00	0.00	0.00	0.00
38.00	0.00	0	590.00	0.00	0.00	0.00
40.00	0.00	0	590.00	0.00	0.00	0.00
42.00	0.00	0	590.00	0.00	0.00	0.00
44.00	0.00	0	590.00	0.00	0.00	0.00
46.00	0.00	0	590.00	0.00	0.00	0.00
48.00	0.00	0	590.00	0.00	0.00	0.00
50.00	0.00	0	590.00	0.00	0.00	0.00
52.00	0.00	0	590.00	0.00	0.00	0.00
54.00	0.00	0	590.00	0.00	0.00	0.00
56.00	0.00	0	590.00	0.00	0.00	0.00
58.00	0.00	0	590.00	0.00	0.00	0.00
60.00	0.00	0	590.00	0.00	0.00	0.00
62.00	0.00	0	590.00	0.00	0.00	0.00
64.00	0.00	0	590.00	0.00	0.00	0.00
66.00	0.00	0	590.00	0.00	0.00	0.00
68.00	0.00	0	590.00	0.00	0.00	0.00
70.00	0.00	0	590.00	0.00	0.00	0.00
72.00	0.00	0	590.00	0.00	0.00	0.00
74.00	0.00	0	590.00	0.00	0.00	0.00
76.00	0.00	0	590.00	0.00	0.00	0.00
78.00	0.00	0	590.00	0.00	0.00	0.00
80.00	0.00	0	590.00	0.00	0.00	0.00

Stage-Discharge for Pond 33P: Basin 11

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
590.00	0.00	**0.00**	0.00
590.05	3.13	**3.13**	0.00
590.10	3.13	3.13	0.00
590.15	3.31	3.13	0.18
590.20	3.64	3.13	0.51
590.25	4.07	3.13	0.94
590.30	4.58	3.13	1.45
590.35	5.15	3.13	2.02
590.40	5.78	3.13	2.65
590.45	6.46	3.13	3.34
590.50	7.20	3.13	4.07
590.55	7.97	3.13	4.85
590.60	8.79	3.13	5.66
590.65	9.65	3.13	6.52
590.70	10.54	3.13	7.42
590.75	11.47	3.13	8.35
590.80	12.43	3.13	9.31
590.85	13.43	3.13	10.30
590.90	14.45	3.13	11.32
590.95	15.50	3.13	12.38
591.00	16.58	3.13	13.46
591.05	17.69	3.13	14.56
591.10	18.82	3.13	15.70
591.15	19.98	3.13	16.85
591.20	21.16	3.13	18.03
591.25	22.36	3.13	19.24
591.30	23.59	3.13	20.46
591.35	24.83	3.13	21.71
591.40	26.10	3.13	22.97
591.45	27.39	3.13	24.26
591.50	28.69	3.13	25.57
591.55	30.02	3.13	26.89
591.60	31.36	3.13	28.23
591.65	32.72	3.13	29.59
591.70	34.10	3.13	30.97
591.75	35.49	3.13	32.37
591.80	36.90	3.13	33.78
591.85	38.33	3.13	35.20
591.90	39.77	3.13	36.64
591.95	41.22	3.13	38.10
592.00	42.69	3.13	39.57
592.05	44.17	3.13	41.05
592.10	45.67	3.13	42.55
592.15	47.18	3.13	44.05
592.20	48.70	3.13	45.58
592.25	50.24	3.13	47.11
592.30	51.78	3.13	48.66
592.35	53.34	3.13	50.21
592.40	**54.91**	3.13	**51.78**

Stage-Area-Storage for Pond 33P: Basin 11

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
590.00	**13,504**	0
590.05	13,504	270
590.10	13,504	540
590.15	13,504	810
590.20	13,504	1,080
590.25	13,504	1,350
590.30	13,504	1,620
590.35	13,504	1,891
590.40	13,504	2,161
590.45	13,504	2,431
590.50	13,504	2,701
590.55	13,504	2,971
590.60	13,504	3,241
590.65	13,504	3,511
590.70	13,504	3,781
590.75	13,504	4,051
590.80	13,504	4,321
590.85	13,504	4,591
590.90	13,504	4,861
590.95	13,504	5,132
591.00	13,504	5,402
591.05	13,504	5,672
591.10	13,504	5,942
591.15	13,504	6,212
591.20	13,504	6,482
591.25	13,504	6,752
591.30	13,504	7,022
591.35	13,504	7,292
591.40	13,504	7,562
591.45	13,504	7,832
591.50	13,504	8,102
591.55	13,504	8,372
591.60	13,504	8,643
591.65	13,504	8,913
591.70	13,504	9,183
591.75	13,504	9,453
591.80	13,504	9,723
591.85	13,504	9,993
591.90	13,504	10,263
591.95	13,504	10,533
592.00	13,504	10,803
592.05	13,504	11,073
592.10	13,504	11,343
592.15	13,504	11,613
592.20	13,504	11,884
592.25	13,504	12,154
592.30	13,504	12,424
592.35	13,504	12,694
592.40	13,504	**12,964**

Summary for Pond 41P: Basin 10

Inflow Area = 97,058 sf, 61.64% Impervious, Inflow Depth = 2.46" for 2-Year event
Inflow = 4.80 cfs @ 12.18 hrs, Volume= 19,894 cf
Outflow = 2.87 cfs @ 12.32 hrs, Volume= 19,894 cf, Atten= 40%, Lag= 8.2 min
Discarded = 2.22 cfs @ 12.04 hrs, Volume= 19,528 cf
Primary = 0.65 cfs @ 12.32 hrs, Volume= 367 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 576.18' @ 12.32 hrs Surf.Area= 9,583 sf Storage= 1,769 cf

Plug-Flow detention time= 4.0 min calculated for 19,884 cf (100% of inflow)
Center-of-Mass det. time= 4.0 min (786.7 - 782.7)

Volume	Invert	Avail.Storage	Storage Description
#1	576.00'	28,749 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
576.00	9,583	0	0
577.00	9,583	9,583	9,583
578.00	9,583	9,583	19,166
579.00	9,583	9,583	28,749

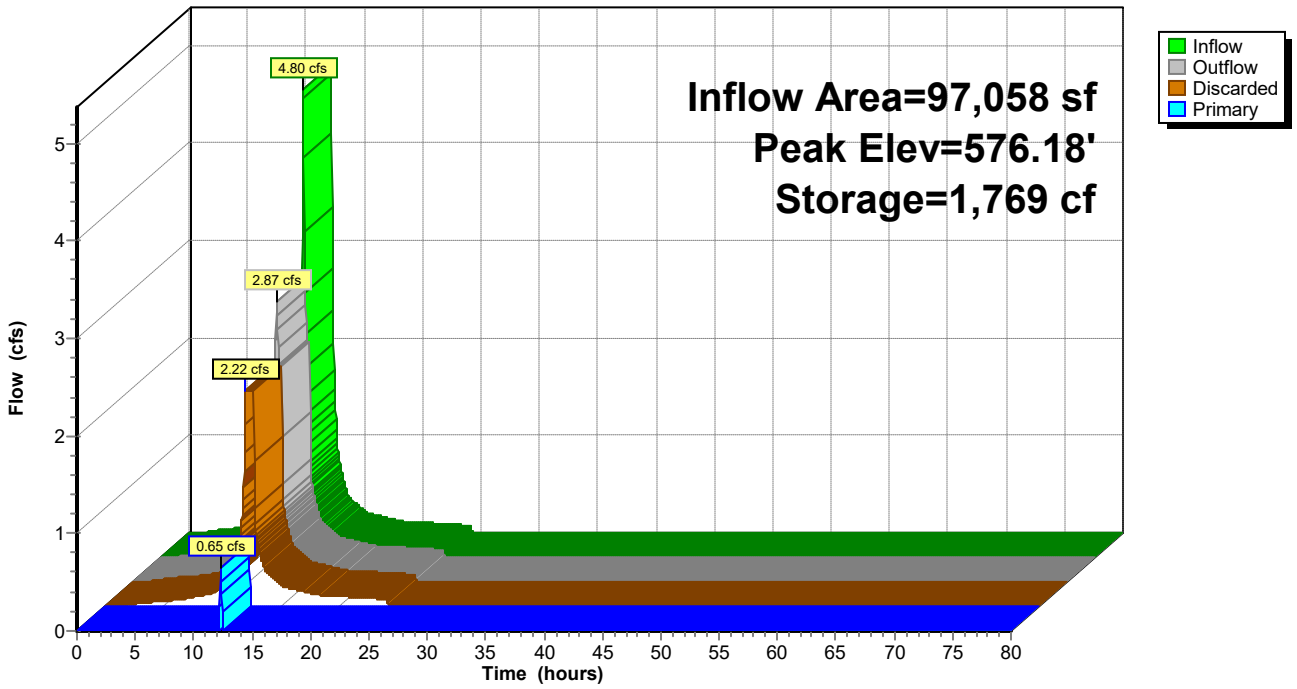
Device	Routing	Invert	Outlet Devices
#1	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	576.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=2.22 cfs @ 12.04 hrs HW=576.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 2.22 cfs)

Primary OutFlow Max=0.62 cfs @ 12.32 hrs HW=576.18' (Free Discharge)
├**1=Grate** (Weir Controls 0.31 cfs @ 0.61 fps)
└**2=Grate** (Weir Controls 0.31 cfs @ 0.61 fps)

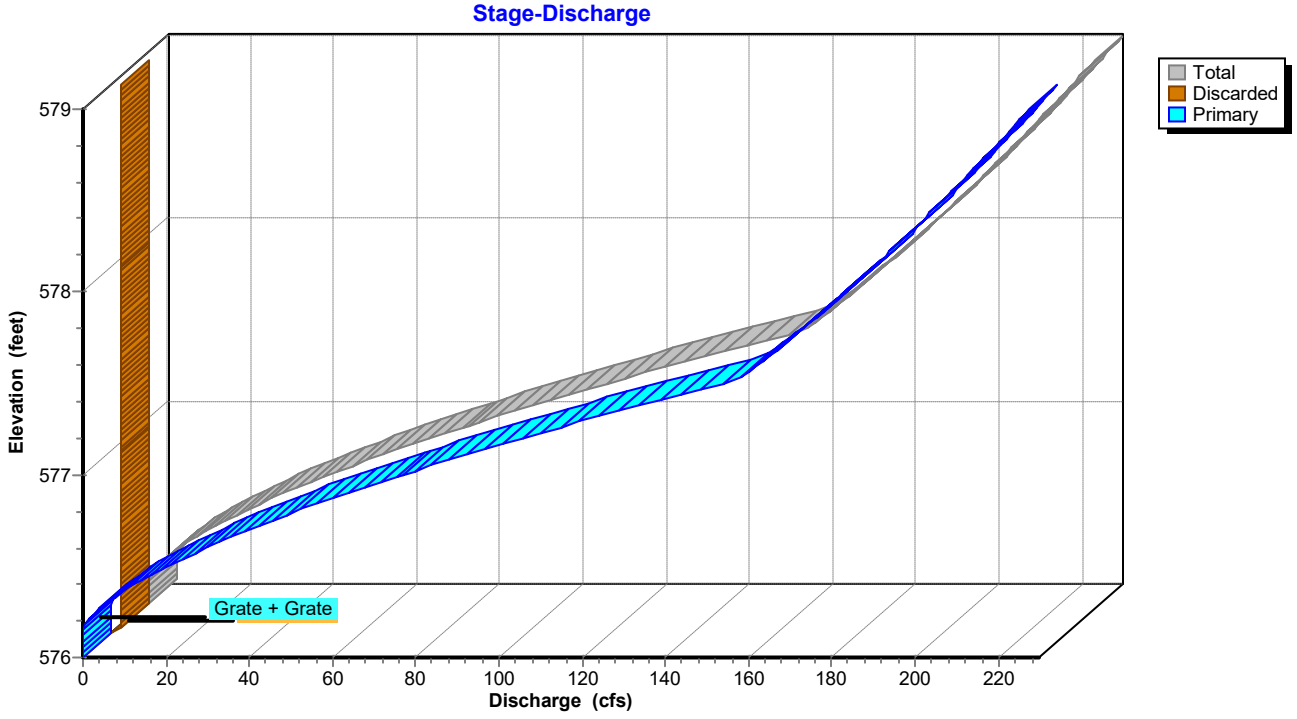
Pond 41P: Basin 10

Hydrograph



Pond 41P: Basin 10

Stage-Discharge



Hydrograph for Pond 41P: Basin 10

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	576.00	0.00	0.00	0.00
2.00	0.02	2	576.00	0.02	0.02	0.00
4.00	0.05	6	576.00	0.04	0.04	0.00
6.00	0.07	8	576.00	0.07	0.07	0.00
8.00	0.11	14	576.00	0.11	0.11	0.00
10.00	0.20	26	576.00	0.20	0.20	0.00
12.00	**2.16**	**241**	**576.03**	**1.86**	**1.86**	**0.00**
14.00	**0.33**	**43**	**576.00**	**0.33**	**0.33**	**0.00**
16.00	0.18	24	576.00	0.18	0.18	0.00
18.00	0.12	16	576.00	0.13	0.13	0.00
20.00	0.11	14	576.00	0.11	0.11	0.00
22.00	0.09	12	576.00	0.09	0.09	0.00
24.00	0.08	10	576.00	0.08	0.08	0.00
26.00	0.00	0	576.00	0.00	0.00	0.00
28.00	0.00	0	576.00	0.00	0.00	0.00
30.00	0.00	0	576.00	0.00	0.00	0.00
32.00	0.00	0	576.00	0.00	0.00	0.00
34.00	0.00	0	576.00	0.00	0.00	0.00
36.00	0.00	0	576.00	0.00	0.00	0.00
38.00	0.00	0	576.00	0.00	0.00	0.00
40.00	0.00	0	576.00	0.00	0.00	0.00
42.00	0.00	0	576.00	0.00	0.00	0.00
44.00	0.00	0	576.00	0.00	0.00	0.00
46.00	0.00	0	576.00	0.00	0.00	0.00
48.00	0.00	0	576.00	0.00	0.00	0.00
50.00	0.00	0	576.00	0.00	0.00	0.00
52.00	0.00	0	576.00	0.00	0.00	0.00
54.00	0.00	0	576.00	0.00	0.00	0.00
56.00	0.00	0	576.00	0.00	0.00	0.00
58.00	0.00	0	576.00	0.00	0.00	0.00
60.00	0.00	0	576.00	0.00	0.00	0.00
62.00	0.00	0	576.00	0.00	0.00	0.00
64.00	0.00	0	576.00	0.00	0.00	0.00
66.00	0.00	0	576.00	0.00	0.00	0.00
68.00	0.00	0	576.00	0.00	0.00	0.00
70.00	0.00	0	576.00	0.00	0.00	0.00
72.00	0.00	0	576.00	0.00	0.00	0.00
74.00	0.00	0	576.00	0.00	0.00	0.00
76.00	0.00	0	576.00	0.00	0.00	0.00
78.00	0.00	0	576.00	0.00	0.00	0.00
80.00	0.00	0	576.00	0.00	0.00	0.00

Stage-Discharge for Pond 41P: Basin 10

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
576.00	0.00	**0.00**	0.00
576.05	2.22	**2.22**	0.00
576.10	2.22	2.22	0.00
576.15	2.22	2.22	0.00
576.20	3.32	2.22	1.10
576.25	5.32	2.22	3.10
576.30	7.92	2.22	5.70
576.35	10.99	2.22	8.77
576.40	14.48	2.22	12.26
576.45	18.34	2.22	16.12
576.50	22.53	2.22	20.31
576.55	27.04	2.22	24.82
576.60	31.83	2.22	29.61
576.65	36.90	2.22	34.68
576.70	42.23	2.22	40.01
576.75	47.81	2.22	45.59
576.80	53.63	2.22	51.41
576.85	59.67	2.22	57.45
576.90	65.94	2.22	63.72
576.95	72.41	2.22	70.19
577.00	79.10	2.22	76.88
577.05	85.98	2.22	83.76
577.10	93.05	2.22	90.84
577.15	100.32	2.22	98.10
577.20	107.77	2.22	105.55
577.25	115.40	2.22	113.18
577.30	123.20	2.22	120.98
577.35	131.17	2.22	128.96
577.40	139.32	2.22	137.10
577.45	147.62	2.22	145.41
577.50	156.09	2.22	153.88
577.55	161.74	2.22	159.52
577.60	164.56	2.22	162.34
577.65	167.34	2.22	165.12
577.70	170.07	2.22	167.85
577.75	172.75	2.22	170.53
577.80	175.40	2.22	173.18
577.85	178.00	2.22	175.78
577.90	180.57	2.22	178.35
577.95	183.10	2.22	180.88
578.00	185.59	2.22	183.37
578.05	188.05	2.22	185.84
578.10	190.48	2.22	188.26
578.15	192.88	2.22	190.66
578.20	195.25	2.22	193.03
578.25	197.59	2.22	195.37
578.30	199.90	2.22	197.68
578.35	202.19	2.22	199.97
578.40	204.45	2.22	202.23
578.45	206.68	2.22	204.46
578.50	208.89	2.22	206.67
578.55	211.08	2.22	208.86
578.60	213.24	2.22	211.03
578.65	215.39	2.22	213.17
578.70	217.51	2.22	215.29
578.75	219.61	2.22	217.39
578.80	221.69	2.22	219.47
578.85	223.75	2.22	221.53
578.90	225.79	2.22	223.57
578.95	227.81	2.22	225.60
579.00	**229.82**	2.22	**227.60**

Stage-Area-Storage for Pond 41P: Basin 10

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
576.00	**9,583**	0
576.05	9,583	479
576.10	9,583	958
576.15	9,583	1,437
576.20	9,583	1,917
576.25	9,583	2,396
576.30	9,583	2,875
576.35	9,583	3,354
576.40	9,583	3,833
576.45	9,583	4,312
576.50	9,583	4,792
576.55	9,583	5,271
576.60	9,583	5,750
576.65	9,583	6,229
576.70	9,583	6,708
576.75	9,583	7,187
576.80	9,583	7,666
576.85	9,583	8,146
576.90	9,583	8,625
576.95	9,583	9,104
577.00	9,583	9,583
577.05	9,583	10,062
577.10	9,583	10,541
577.15	9,583	11,020
577.20	9,583	11,500
577.25	9,583	11,979
577.30	9,583	12,458
577.35	9,583	12,937
577.40	9,583	13,416
577.45	9,583	13,895
577.50	9,583	14,375
577.55	9,583	14,854
577.60	9,583	15,333
577.65	9,583	15,812
577.70	9,583	16,291
577.75	9,583	16,770
577.80	9,583	17,249
577.85	9,583	17,729
577.90	9,583	18,208
577.95	9,583	18,687
578.00	9,583	19,166
578.05	9,583	19,645
578.10	9,583	20,124
578.15	9,583	20,603
578.20	9,583	21,083
578.25	9,583	21,562
578.30	9,583	22,041
578.35	9,583	22,520
578.40	9,583	22,999
578.45	9,583	23,478
578.50	9,583	23,958
578.55	9,583	24,437
578.60	9,583	24,916
578.65	9,583	25,395
578.70	9,583	25,874
578.75	9,583	26,353
578.80	9,583	26,832
578.85	9,583	27,312
578.90	9,583	27,791
578.95	9,583	28,270
579.00	9,583	**28,749**

Summary for Pond 42P: Basin 9

Inflow Area = 25,049 sf, 64.41% Impervious, Inflow Depth = 2.58" for 2-Year event
Inflow = 1.46 cfs @ 12.14 hrs, Volume= 5,390 cf
Outflow = 0.61 cfs @ 12.00 hrs, Volume= 5,390 cf, Atten= 59%, Lag= 0.0 min
Discarded = 0.61 cfs @ 12.00 hrs, Volume= 5,390 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 562.21' @ 12.31 hrs Surf.Area= 6,534 sf Storage= 557 cf

Plug-Flow detention time= 4.3 min calculated for 5,387 cf (100% of inflow)
Center-of-Mass det. time= 4.3 min (782.3 - 778.0)

Volume	Invert	Avail.Storage	Storage Description
#1	562.00'	6,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 15,812 cf Overall x 40.0% Voids

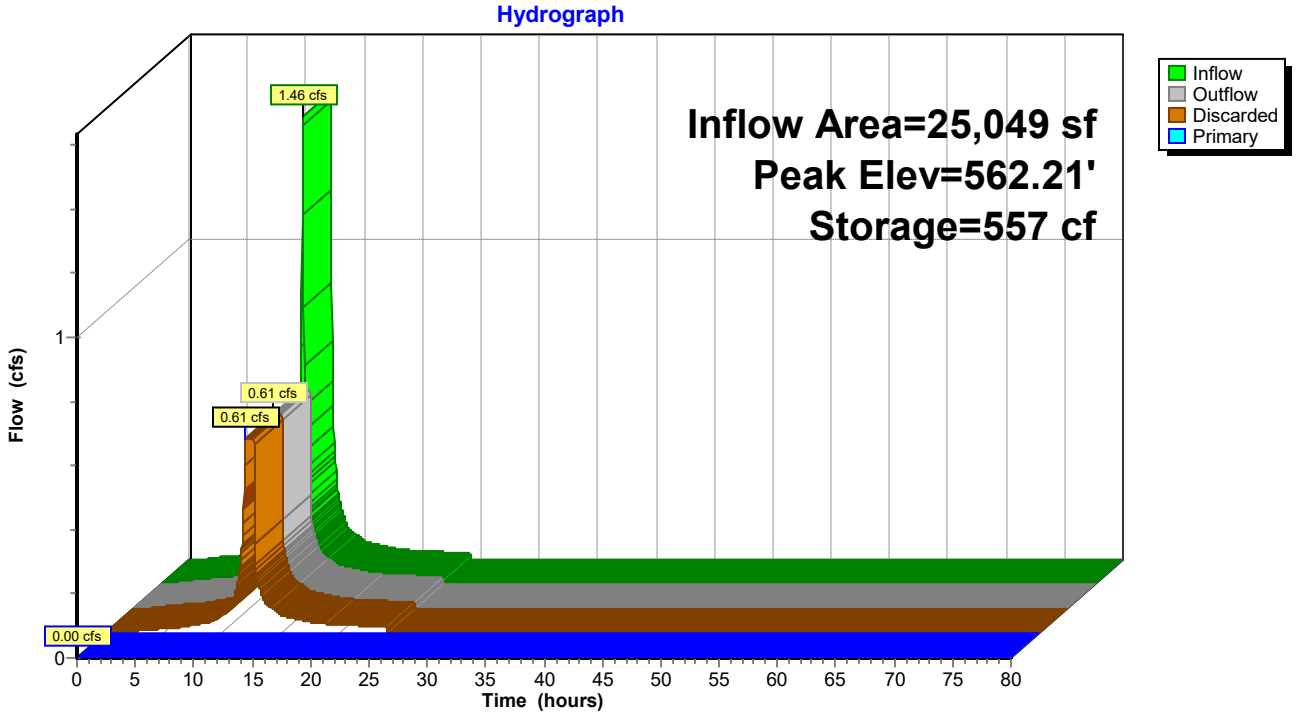
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
562.00	6,534	0	0
563.00	6,534	6,534	6,534
564.00	6,534	6,534	13,068
564.42	6,534	2,744	15,812

Device	Routing	Invert	Outlet Devices
#1	Primary	564.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	563.00'	**3.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	562.00'	**4.000 in/hr Exfiltration over Surface area**

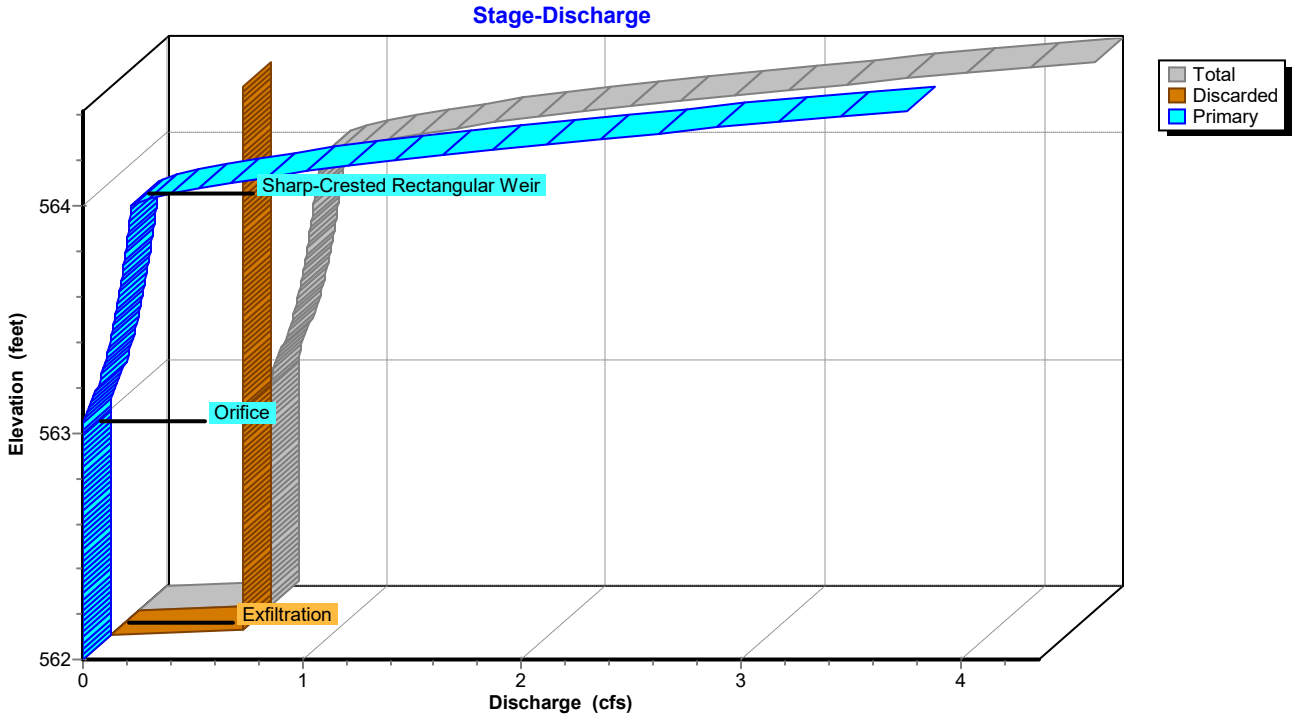
Discarded OutFlow Max=0.61 cfs @ 12.00 hrs HW=562.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.61 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=562.00' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Controls 0.00 cfs)

Pond 42P: Basin 9



Pond 42P: Basin 9



Hydrograph for Pond 42P: Basin 9

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	562.00	0.00	0.00	**0.00**
2.00	0.00	0	562.00	0.00	0.00	0.00
4.00	0.01	1	562.00	0.01	0.01	0.00
6.00	0.02	2	562.00	0.02	0.02	0.00
8.00	0.03	3	562.00	0.03	0.03	0.00
10.00	0.06	6	562.00	0.06	0.06	0.00
12.00	**0.74**	**69**	**562.03**	**0.61**	**0.61**	0.00
14.00	**0.09**	**9**	**562.00**	0.09	0.09	0.00
16.00	0.05	5	562.00	0.05	0.05	0.00
18.00	0.03	3	562.00	0.03	0.03	0.00
20.00	0.03	3	562.00	0.03	0.03	0.00
22.00	0.02	3	562.00	0.02	0.02	0.00
24.00	0.02	2	562.00	0.02	0.02	0.00
26.00	0.00	0	562.00	0.00	0.00	0.00
28.00	0.00	0	562.00	0.00	0.00	0.00
30.00	0.00	0	562.00	0.00	0.00	0.00
32.00	0.00	0	562.00	0.00	0.00	0.00
34.00	0.00	0	562.00	0.00	0.00	0.00
36.00	0.00	0	562.00	0.00	0.00	0.00
38.00	0.00	0	562.00	0.00	0.00	0.00
40.00	0.00	0	562.00	0.00	0.00	0.00
42.00	0.00	0	562.00	0.00	0.00	0.00
44.00	0.00	0	562.00	0.00	0.00	0.00
46.00	0.00	0	562.00	0.00	0.00	0.00
48.00	0.00	0	562.00	0.00	0.00	0.00
50.00	0.00	0	562.00	0.00	0.00	0.00
52.00	0.00	0	562.00	0.00	0.00	0.00
54.00	0.00	0	562.00	0.00	0.00	0.00
56.00	0.00	0	562.00	0.00	0.00	0.00
58.00	0.00	0	562.00	0.00	0.00	0.00
60.00	0.00	0	562.00	0.00	0.00	0.00
62.00	0.00	0	562.00	0.00	0.00	0.00
64.00	0.00	0	562.00	0.00	0.00	0.00
66.00	0.00	0	562.00	0.00	0.00	0.00
68.00	0.00	0	562.00	0.00	0.00	0.00
70.00	0.00	0	562.00	0.00	0.00	0.00
72.00	0.00	0	562.00	0.00	0.00	0.00
74.00	0.00	0	562.00	0.00	0.00	0.00
76.00	0.00	0	562.00	0.00	0.00	0.00
78.00	0.00	0	562.00	0.00	0.00	0.00
80.00	0.00	0	562.00	0.00	0.00	0.00

Stage-Discharge for Pond 42P: Basin 9

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
562.00	0.00	**0.00**	0.00
562.05	0.61	**0.61**	0.00
562.10	0.61	0.61	0.00
562.15	0.61	0.61	0.00
562.20	0.61	0.61	0.00
562.25	0.61	0.61	0.00
562.30	0.61	0.61	0.00
562.35	0.61	0.61	0.00
562.40	0.61	0.61	0.00
562.45	0.61	0.61	0.00
562.50	0.61	0.61	0.00
562.55	0.61	0.61	0.00
562.60	0.61	0.61	0.00
562.65	0.61	0.61	0.00
562.70	0.61	0.61	0.00
562.75	0.61	0.61	0.00
562.80	0.61	0.61	0.00
562.85	0.61	0.61	0.00
562.90	0.61	0.61	0.00
562.95	0.61	0.61	0.00
563.00	0.61	0.61	0.00
563.05	0.61	0.61	0.01
563.10	0.62	0.61	0.02
563.15	0.65	0.61	0.04
563.20	0.67	0.61	0.06
563.25	0.69	0.61	0.08
563.30	0.70	0.61	0.10
563.35	0.72	0.61	0.11
563.40	0.73	0.61	0.12
563.45	0.74	0.61	0.13
563.50	0.75	0.61	0.14
563.55	0.76	0.61	0.15
563.60	0.77	0.61	0.16
563.65	0.78	0.61	0.17
563.70	0.78	0.61	0.18
563.75	0.79	0.61	0.19
563.80	0.80	0.61	0.19
563.85	0.81	0.61	0.20
563.90	0.81	0.61	0.21
563.95	0.82	0.61	0.21
564.00	0.83	0.61	0.22
564.05	0.98	0.61	0.37
564.10	1.25	0.61	0.64
564.15	1.60	0.61	0.99
564.20	2.01	0.61	1.40
564.25	2.47	0.61	1.87
564.30	2.98	0.61	2.37
564.35	3.53	0.61	2.92
564.40	**4.11**	0.61	**3.51**

Stage-Area-Storage for Pond 42P: Basin 9

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
562.00	**6,534**	0
562.05	6,534	131
562.10	6,534	261
562.15	6,534	392
562.20	6,534	523
562.25	6,534	653
562.30	6,534	784
562.35	6,534	915
562.40	6,534	1,045
562.45	6,534	1,176
562.50	6,534	1,307
562.55	6,534	1,437
562.60	6,534	1,568
562.65	6,534	1,699
562.70	6,534	1,830
562.75	6,534	1,960
562.80	6,534	2,091
562.85	6,534	2,222
562.90	6,534	2,352
562.95	6,534	2,483
563.00	6,534	2,614
563.05	6,534	2,744
563.10	6,534	2,875
563.15	6,534	3,006
563.20	6,534	3,136
563.25	6,534	3,267
563.30	6,534	3,398
563.35	6,534	3,528
563.40	6,534	3,659
563.45	6,534	3,790
563.50	6,534	3,920
563.55	6,534	4,051
563.60	6,534	4,182
563.65	6,534	4,312
563.70	6,534	4,443
563.75	6,534	4,574
563.80	6,534	4,704
563.85	6,534	4,835
563.90	6,534	4,966
563.95	6,534	5,097
564.00	6,534	5,227
564.05	6,534	5,358
564.10	6,534	5,489
564.15	6,534	5,619
564.20	6,534	5,750
564.25	6,534	5,881
564.30	6,534	6,011
564.35	6,534	6,142
564.40	6,534	**6,273**

Summary for Pond 48P: Basin 8

Inflow Area = 62,190 sf, 63.36% Impervious, Inflow Depth = 2.54" for 2-Year event
Inflow = 3.43 cfs @ 12.16 hrs, Volume= 13,161 cf
Outflow = 0.95 cfs @ 12.45 hrs, Volume= 13,161 cf, Atten= 72%, Lag= 17.4 min
Discarded = 0.93 cfs @ 11.92 hrs, Volume= 13,131 cf
Primary = 0.03 cfs @ 12.45 hrs, Volume= 31 cf
Routed to Pond 49P : Basin 7

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 573.54' @ 12.45 hrs Surf.Area= 10,019 sf Storage= 2,179 cf

Plug-Flow detention time= 11.7 min calculated for 13,155 cf (100% of inflow)
Center-of-Mass det. time= 11.7 min (791.5 - 779.8)

Volume	Invert	Avail.Storage	Storage Description
#1	573.00'	12,023 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 30,057 cf Overall x 40.0% Voids

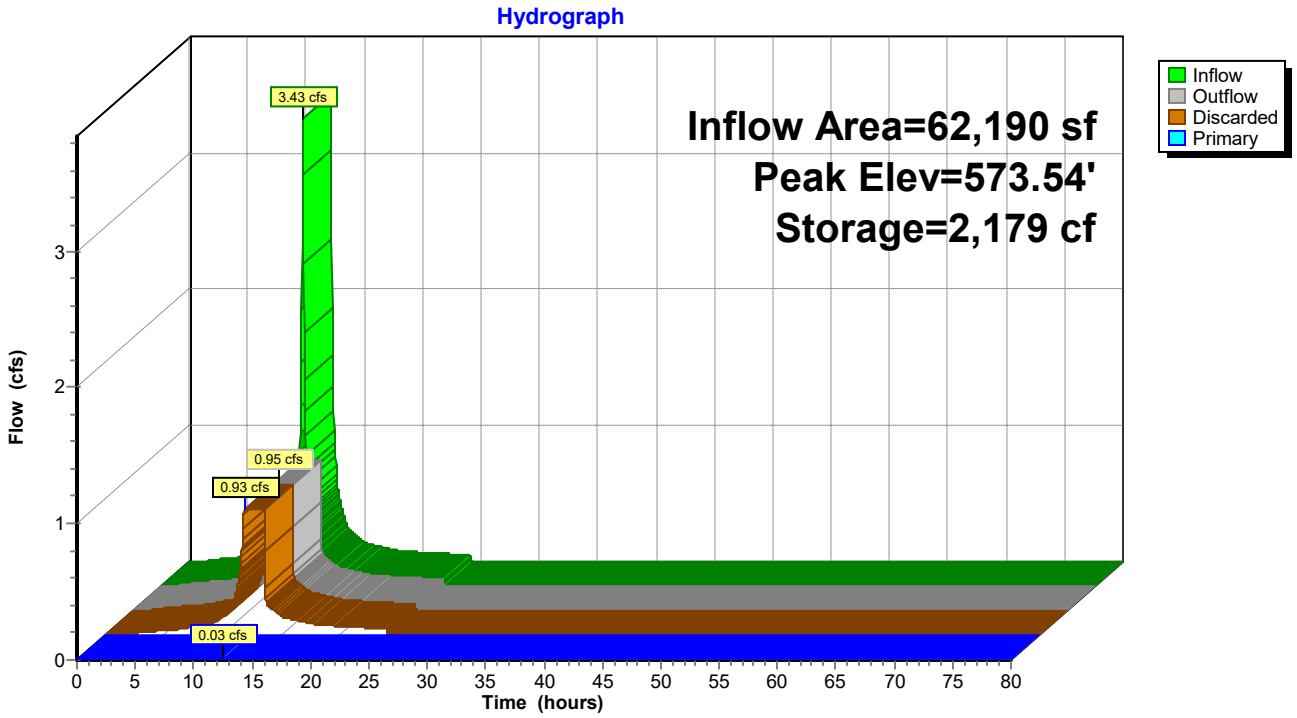
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
573.00	10,019	0	0
574.00	10,019	10,019	10,019
575.00	10,019	10,019	20,038
576.00	10,019	10,019	30,057

Device	Routing	Invert	Outlet Devices
#1	Primary	575.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	573.45'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	573.00'	**4.000 in/hr Exfiltration over Surface area**

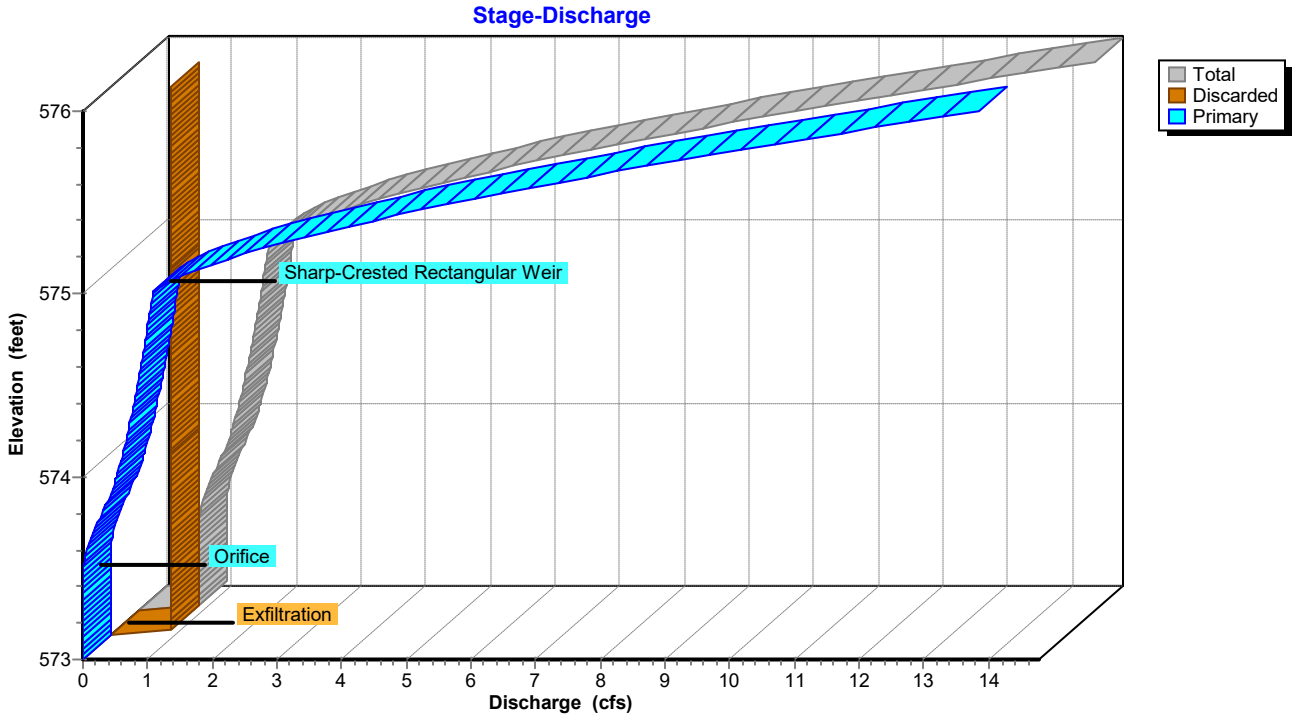
Discarded OutFlow Max=0.93 cfs @ 11.92 hrs HW=573.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.93 cfs)

Primary OutFlow Max=0.03 cfs @ 12.45 hrs HW=573.54' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Orifice Controls 0.03 cfs @ 1.04 fps)

Pond 48P: Basin 8



Pond 48P: Basin 8



Hydrograph for Pond 48P: Basin 8

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	573.00	0.00	0.00	0.00
2.00	0.01	1	573.00	0.01	0.01	0.00
4.00	0.03	4	573.00	0.03	0.03	0.00
6.00	0.04	6	573.00	0.04	0.04	0.00
8.00	0.07	9	573.00	0.07	0.07	0.00
10.00	0.14	17	573.00	0.13	**0.13**	0.00
12.00	**1.65**	**261**	**573.07**	**0.93**	**0.93**	**0.00**
14.00	**0.21**	**28**	**573.01**	**0.22**	0.22	**0.00**
16.00	0.12	16	573.00	0.12	0.12	0.00
18.00	0.08	11	573.00	0.08	0.08	0.00
20.00	0.07	9	573.00	0.07	0.07	0.00
22.00	0.06	8	573.00	0.06	0.06	0.00
24.00	0.05	6	573.00	0.05	0.05	0.00
26.00	0.00	0	573.00	0.00	0.00	0.00
28.00	0.00	0	573.00	0.00	0.00	0.00
30.00	0.00	0	573.00	0.00	0.00	0.00
32.00	0.00	0	573.00	0.00	0.00	0.00
34.00	0.00	0	573.00	0.00	0.00	0.00
36.00	0.00	0	573.00	0.00	0.00	0.00
38.00	0.00	0	573.00	0.00	0.00	0.00
40.00	0.00	0	573.00	0.00	0.00	0.00
42.00	0.00	0	573.00	0.00	0.00	0.00
44.00	0.00	0	573.00	0.00	0.00	0.00
46.00	0.00	0	573.00	0.00	0.00	0.00
48.00	0.00	0	573.00	0.00	0.00	0.00
50.00	0.00	0	573.00	0.00	0.00	0.00
52.00	0.00	0	573.00	0.00	0.00	0.00
54.00	0.00	0	573.00	0.00	0.00	0.00
56.00	0.00	0	573.00	0.00	0.00	0.00
58.00	0.00	0	573.00	0.00	0.00	0.00
60.00	0.00	0	573.00	0.00	0.00	0.00
62.00	0.00	0	573.00	0.00	0.00	0.00
64.00	0.00	0	573.00	0.00	0.00	0.00
66.00	0.00	0	573.00	0.00	0.00	0.00
68.00	0.00	0	573.00	0.00	0.00	0.00
70.00	0.00	0	573.00	0.00	0.00	0.00
72.00	0.00	0	573.00	0.00	0.00	0.00
74.00	0.00	0	573.00	0.00	0.00	0.00
76.00	0.00	0	573.00	0.00	0.00	0.00
78.00	0.00	0	573.00	0.00	0.00	0.00
80.00	0.00	0	573.00	0.00	0.00	0.00

Stage-Discharge for Pond 48P: Basin 8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
573.00	0.00	**0.00**	0.00
573.05	0.93	**0.93**	0.00
573.10	0.93	0.93	0.00
573.15	0.93	0.93	0.00
573.20	0.93	0.93	0.00
573.25	0.93	0.93	0.00
573.30	0.93	0.93	0.00
573.35	0.93	0.93	0.00
573.40	0.93	0.93	0.00
573.45	0.93	0.93	0.00
573.50	0.94	0.93	0.01
573.55	0.96	0.93	0.03
573.60	0.99	0.93	0.07
573.65	1.04	0.93	0.11
573.70	1.09	0.93	0.17
573.75	1.16	0.93	0.23
573.80	1.22	0.93	0.30
573.85	1.29	0.93	0.36
573.90	1.35	0.93	0.43
573.95	1.40	0.93	0.47
574.00	1.45	0.93	0.52
574.05	1.49	0.93	0.56
574.10	1.53	0.93	0.60
574.15	1.56	0.93	0.63
574.20	1.60	0.93	0.67
574.25	1.63	0.93	0.70
574.30	1.66	0.93	0.73
574.35	1.69	0.93	0.76
574.40	1.72	0.93	0.79
574.45	1.75	0.93	0.82
574.50	1.77	0.93	0.85
574.55	1.80	0.93	0.87
574.60	1.82	0.93	0.90
574.65	1.85	0.93	0.92
574.70	1.87	0.93	0.95
574.75	1.90	0.93	0.97
574.80	1.92	0.93	0.99
574.85	1.94	0.93	1.01
574.90	1.96	0.93	1.04
574.95	1.98	0.93	1.06
575.00	2.01	0.93	1.08
575.05	2.17	0.93	1.24
575.10	2.46	0.93	1.53
575.15	2.82	0.93	1.89
575.20	3.24	0.93	2.32
575.25	3.72	0.93	2.79
575.30	4.24	0.93	3.31
575.35	4.80	0.93	3.88
575.40	5.40	0.93	4.48
575.45	6.04	0.93	5.11
575.50	6.70	0.93	5.78
575.55	7.40	0.93	6.47
575.60	8.13	0.93	7.20
575.65	8.88	0.93	7.95
575.70	9.66	0.93	8.73
575.75	10.46	0.93	9.53
575.80	11.28	0.93	10.35
575.85	12.13	0.93	11.20
575.90	13.00	0.93	12.07
575.95	13.88	0.93	12.95
576.00	**14.79**	0.93	**13.86**

Stage-Area-Storage for Pond 48P: Basin 8

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
573.00	**10,019**	0
573.05	10,019	200
573.10	10,019	401
573.15	10,019	601
573.20	10,019	802
573.25	10,019	1,002
573.30	10,019	1,202
573.35	10,019	1,403
573.40	10,019	1,603
573.45	10,019	1,803
573.50	10,019	2,004
573.55	10,019	2,204
573.60	10,019	2,405
573.65	10,019	2,605
573.70	10,019	2,805
573.75	10,019	3,006
573.80	10,019	3,206
573.85	10,019	3,406
573.90	10,019	3,607
573.95	10,019	3,807
574.00	10,019	4,008
574.05	10,019	4,208
574.10	10,019	4,408
574.15	10,019	4,609
574.20	10,019	4,809
574.25	10,019	5,010
574.30	10,019	5,210
574.35	10,019	5,410
574.40	10,019	5,611
574.45	10,019	5,811
574.50	10,019	6,011
574.55	10,019	6,212
574.60	10,019	6,412
574.65	10,019	6,613
574.70	10,019	6,813
574.75	10,019	7,013
574.80	10,019	7,214
574.85	10,019	7,414
574.90	10,019	7,614
574.95	10,019	7,815
575.00	10,019	8,015
575.05	10,019	8,216
575.10	10,019	8,416
575.15	10,019	8,616
575.20	10,019	8,817
575.25	10,019	9,017
575.30	10,019	9,217
575.35	10,019	9,418
575.40	10,019	9,618
575.45	10,019	9,819
575.50	10,019	10,019
575.55	10,019	10,219
575.60	10,019	10,420
575.65	10,019	10,620
575.70	10,019	10,821
575.75	10,019	11,021
575.80	10,019	11,221
575.85	10,019	11,422
575.90	10,019	11,622
575.95	10,019	11,822
576.00	10,019	**12,023**

Summary for Pond 49P: Basin 7

Inflow Area = 169,079 sf, 50.99% Impervious, Inflow Depth = 1.38" for 2-Year event
Inflow = 4.54 cfs @ 12.20 hrs, Volume= 19,479 cf
Outflow = 0.56 cfs @ 13.26 hrs, Volume= 13,710 cf, Atten= 88%, Lag= 63.8 min
Primary = 0.56 cfs @ 13.26 hrs, Volume= 13,710 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 531.76' @ 13.26 hrs Surf.Area= 15,692 sf Storage= 11,362 cf

Plug-Flow detention time= 467.4 min calculated for 13,703 cf (70% of inflow)
Center-of-Mass det. time= 361.6 min (1,161.2 - 799.6)

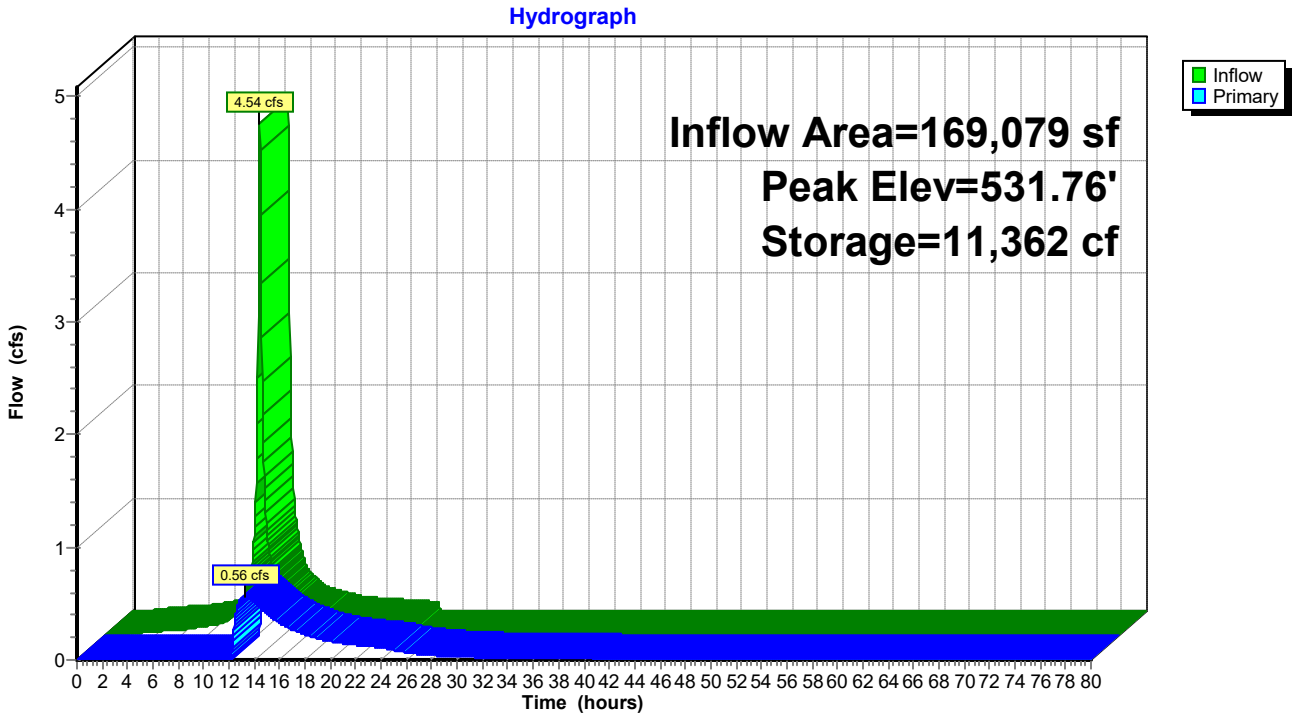
Volume	Invert	Avail.Storage	Storage Description
#1	531.00'	50,966 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
531.00	14,375	0	0
532.00	16,117	15,246	15,246
533.00	17,860	16,989	32,235
534.00	19,602	18,731	50,966

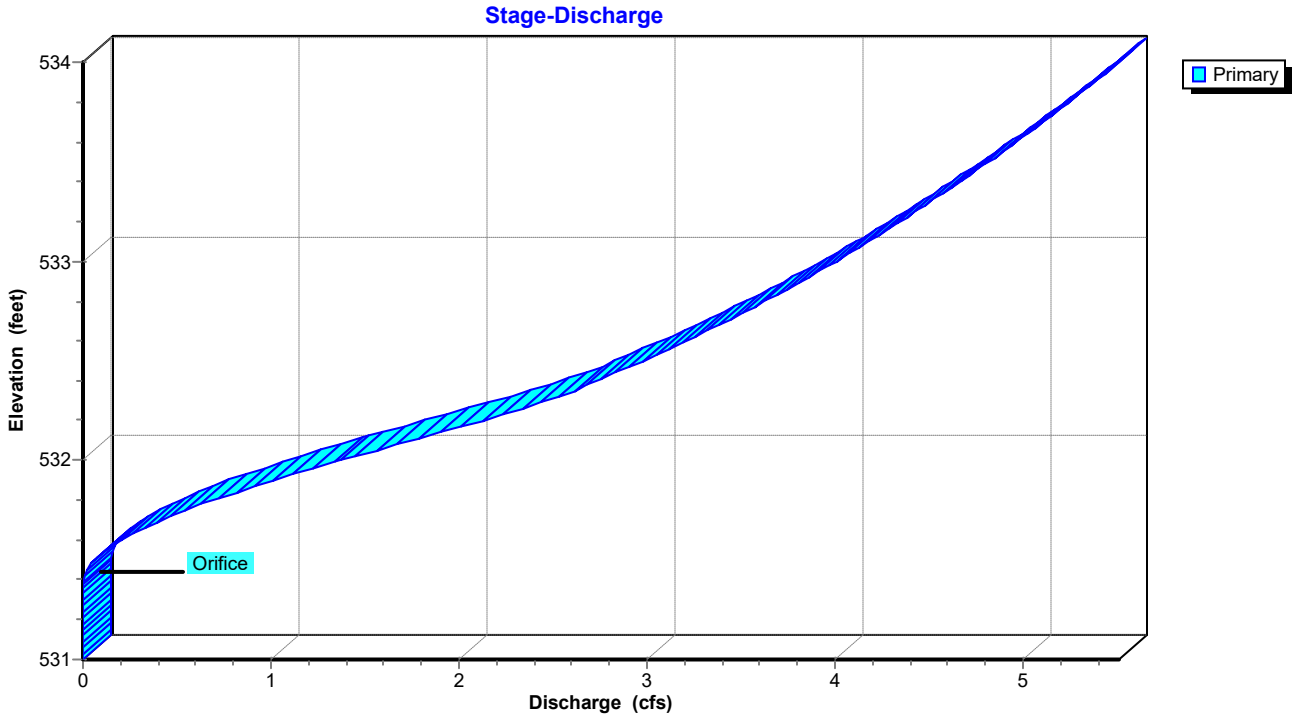
Device	Routing	Invert	Outlet Devices
#1	Primary	531.38'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.56 cfs @ 13.26 hrs HW=531.76' (Free Discharge)
1=Orifice (Orifice Controls 0.56 cfs @ 2.09 fps)

Pond 49P: Basin 7



Pond 49P: Basin 7



Hydrograph for Pond 49P: Basin 7

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	531.00	0.00
2.00	0.01	18	531.00	0.00
4.00	0.04	196	531.01	0.00
6.00	0.05	510	531.04	0.00
8.00	0.08	993	531.07	0.00
10.00	0.16	1,791	531.12	0.00
12.00	**1.88**	**5,096**	**531.35**	**0.00**
14.00	**0.35**	**11,062**	**531.74**	**0.51**
16.00	0.19	9,892	531.66	0.33
18.00	0.13	9,105	531.61	0.23
20.00	0.11	8,582	531.58	0.17
22.00	0.10	8,261	531.56	0.13
24.00	0.08	8,019	531.54	0.11
26.00	0.00	7,445	531.50	0.07
28.00	0.00	7,063	531.48	0.04
30.00	0.00	6,807	531.46	0.03
32.00	0.00	6,627	531.45	0.02
34.00	0.00	6,491	531.44	0.02
36.00	0.00	6,383	531.43	0.01
38.00	0.00	6,297	531.43	0.01
40.00	0.00	6,229	531.42	0.01
42.00	0.00	6,175	531.42	0.01
44.00	0.00	6,127	531.42	0.01
46.00	0.00	6,085	531.41	0.01
48.00	0.00	6,047	531.41	0.01
50.00	0.00	6,012	531.41	0.00
52.00	0.00	5,981	531.41	0.00
54.00	0.00	5,954	531.40	0.00
56.00	0.00	5,929	531.40	0.00
58.00	0.00	5,906	531.40	0.00
60.00	0.00	5,886	531.40	0.00
62.00	0.00	5,868	531.40	0.00
64.00	0.00	5,852	531.40	0.00
66.00	0.00	5,837	531.40	0.00
68.00	0.00	5,824	531.40	0.00
70.00	0.00	5,813	531.39	0.00
72.00	0.00	5,802	531.39	0.00
74.00	0.00	5,792	531.39	0.00
76.00	0.00	5,784	531.39	0.00
78.00	0.00	5,776	531.39	0.00
80.00	0.00	5,769	531.39	0.00

Stage-Discharge for Pond 49P: Basin 7

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
531.00	0.00	532.02	1.45	533.04	4.07
531.02	0.00	532.04	1.52	533.06	4.11
531.04	0.00	532.06	1.60	533.08	4.14
531.06	0.00	532.08	1.67	533.10	4.18
531.08	0.00	532.10	1.75	533.12	4.21
531.10	0.00	532.12	1.83	533.14	4.24
531.12	0.00	532.14	1.90	533.16	4.28
531.14	0.00	532.16	1.98	533.18	4.31
531.16	0.00	532.18	2.05	533.20	4.34
531.18	0.00	532.20	2.13	533.22	4.38
531.20	0.00	532.22	2.20	533.24	4.41
531.22	0.00	532.24	2.27	533.26	4.44
531.24	0.00	532.26	2.34	533.28	4.47
531.26	0.00	532.28	2.40	533.30	4.51
531.28	0.00	532.30	2.47	533.32	4.54
531.30	0.00	532.32	2.53	533.34	4.57
531.32	0.00	532.34	2.58	533.36	4.60
531.34	0.00	532.36	2.63	533.38	4.63
531.36	0.00	532.38	2.67	533.40	4.66
531.38	0.00	532.40	2.73	533.42	4.69
531.40	0.00	532.42	2.78	533.44	4.72
531.42	0.01	532.44	2.83	533.46	4.75
531.44	0.02	532.46	2.88	533.48	4.78
531.46	0.03	532.48	2.93	533.50	4.81
531.48	0.04	532.50	2.98	533.52	4.84
531.50	0.06	532.52	3.03	533.54	4.87
531.52	0.09	532.54	3.07	533.56	4.90
531.54	0.11	532.56	3.12	533.58	4.93
531.56	0.14	532.58	3.16	533.60	4.96
531.58	0.17	532.60	3.21	533.62	4.99
531.60	0.20	532.62	3.25	533.64	5.02
531.62	0.24	532.64	3.30	533.66	5.05
531.64	0.28	532.66	3.34	533.68	5.07
531.66	0.32	532.68	3.38	533.70	5.10
531.68	0.37	532.70	3.42	533.72	5.13
531.70	0.42	532.72	3.47	533.74	5.16
531.72	0.47	532.74	3.51	533.76	5.19
531.74	0.52	532.76	3.55	533.78	5.21
531.76	0.57	532.78	3.59	533.80	5.24
531.78	0.63	532.80	3.63	533.82	5.27
531.80	0.69	532.82	3.67	533.84	5.29
531.82	0.75	532.84	3.71	533.86	5.32
531.84	0.81	532.86	3.74	533.88	5.35
531.86	0.88	532.88	3.78	533.90	5.37
531.88	0.95	532.90	3.82	533.92	5.40
531.90	1.01	532.92	3.86	533.94	5.43
531.92	1.08	532.94	3.89	533.96	5.45
531.94	1.15	532.96	3.93	533.98	5.48
531.96	1.22	532.98	3.97	534.00	**5.51**
531.98	1.30	533.00	4.00		
532.00	1.37	533.02	4.04		

Stage-Area-Storage for Pond 49P: Basin 7

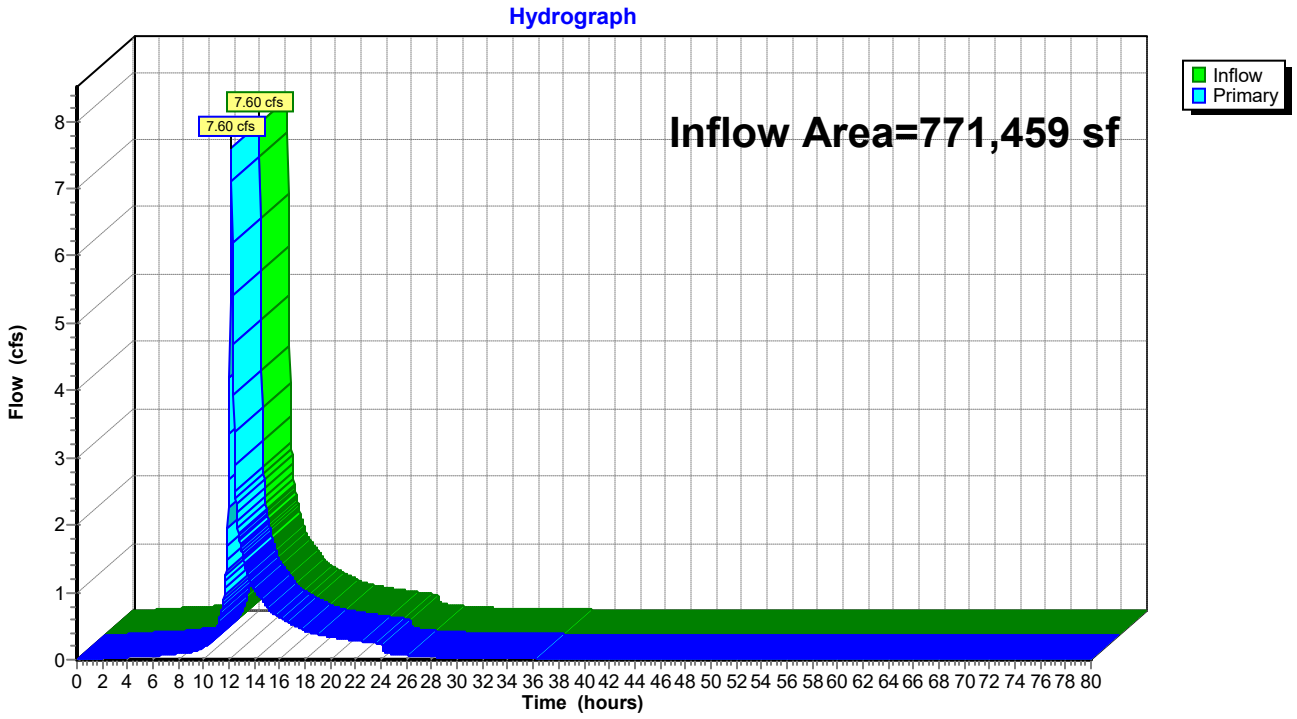
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
531.00	14,375	0
531.05	14,462	721
531.10	14,549	1,446
531.15	14,636	2,176
531.20	14,723	2,910
531.25	14,811	3,648
531.30	14,898	4,391
531.35	14,985	5,138
531.40	15,072	5,889
531.45	15,159	6,645
531.50	15,246	7,405
531.55	15,333	8,170
531.60	15,420	8,939
531.65	15,507	9,712
531.70	15,594	10,489
531.75	15,682	11,271
531.80	15,769	12,057
531.85	15,856	12,848
531.90	15,943	13,643
531.95	16,030	14,442
532.00	16,117	15,246
532.05	16,204	16,054
532.10	16,291	16,866
532.15	16,378	17,683
532.20	16,466	18,504
532.25	16,553	19,330
532.30	16,640	20,160
532.35	16,727	20,994
532.40	16,814	21,832
532.45	16,901	22,675
532.50	16,989	23,522
532.55	17,076	24,374
532.60	17,163	25,230
532.65	17,250	26,090
532.70	17,337	26,955
532.75	17,424	27,824
532.80	17,511	28,697
532.85	17,599	29,575
532.90	17,686	30,457
532.95	17,773	31,344
533.00	17,860	32,235
533.05	17,947	33,130
533.10	18,034	34,029
533.15	18,121	34,933
533.20	18,208	35,841
533.25	18,296	36,754
533.30	18,383	37,671
533.35	18,470	38,592
533.40	18,557	39,518
533.45	18,644	40,448
533.50	18,731	41,382
533.55	18,818	42,321
533.60	18,905	43,264
533.65	18,992	44,211
533.70	19,079	45,163
533.75	19,167	46,119
533.80	19,254	47,080
533.85	19,341	48,045
533.90	19,428	49,014
533.95	19,515	49,988
534.00	**19,602**	**50,966**

Summary for Link 28L: POA 2

Inflow Area = 771,459 sf, 50.89% Impervious, Inflow Depth > 0.66" for 2-Year event
Inflow = 7.60 cfs @ 12.17 hrs, Volume= 42,640 cf
Primary = 7.60 cfs @ 12.17 hrs, Volume= 42,640 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 28L: POA 2



Hydrograph for Link 28L: POA 2

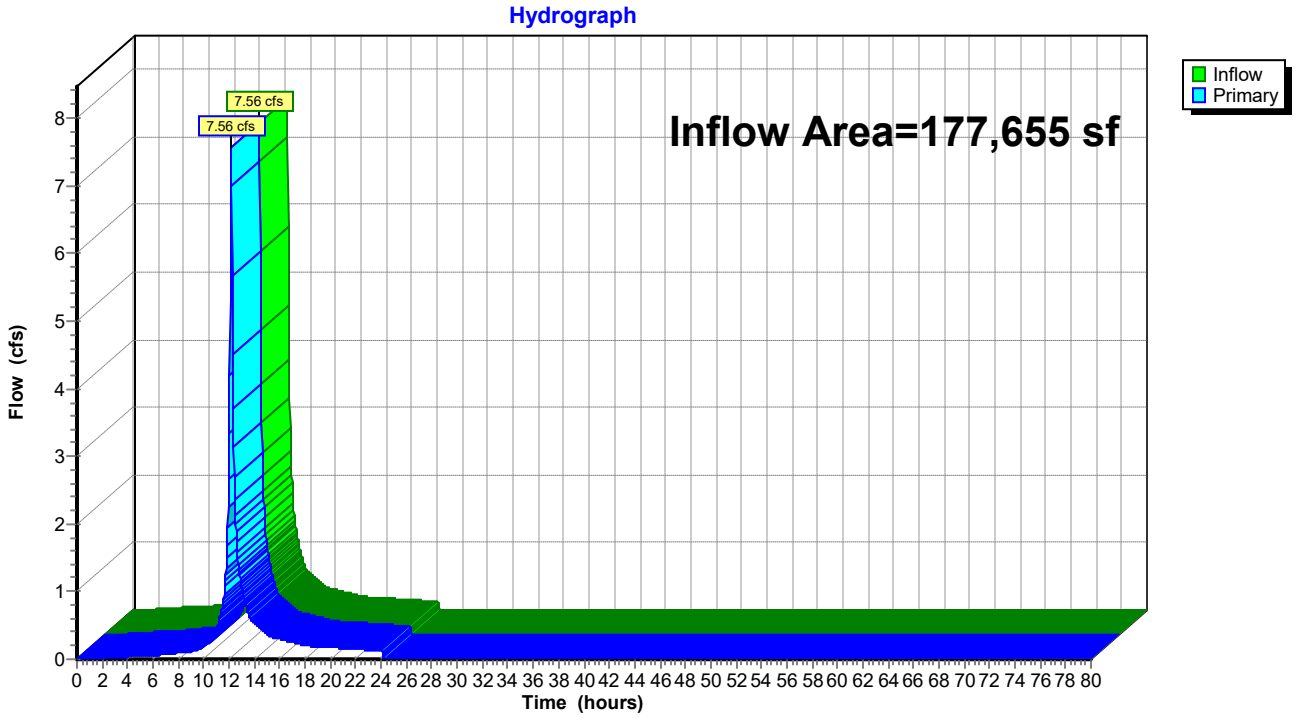
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.01	0.00	0.01
0.80	0.00	0.00	0.00	41.60	0.01	0.00	0.01
1.60	0.01	0.00	0.01	42.40	0.01	0.00	0.01
2.40	0.02	0.00	0.02	43.20	0.01	0.00	0.01
3.20	0.03	0.00	0.03	44.00	0.01	0.00	0.01
4.00	0.04	0.00	0.04	44.80	0.01	0.00	0.01
4.80	0.05	0.00	0.05	45.60	0.01	0.00	0.01
5.60	0.05	0.00	0.05	46.40	0.01	0.00	0.01
6.40	0.06	0.00	0.06	47.20	0.01	0.00	0.01
7.20	0.08	0.00	0.08	48.00	0.01	0.00	0.01
8.00	0.10	0.00	0.10	48.80	0.00	0.00	0.00
8.80	0.11	0.00	0.11	49.60	0.00	0.00	0.00
9.60	0.15	0.00	0.15	50.40	0.00	0.00	0.00
10.40	0.25	0.00	0.25	51.20	0.00	0.00	0.00
11.20	0.56	0.00	0.56	52.00	0.00	0.00	0.00
12.00	**3.34**	0.00	**3.34**	52.80	0.00	0.00	0.00
12.80	**1.80**	0.00	**1.80**	53.60	0.00	0.00	0.00
13.60	1.19	0.00	1.19	54.40	0.00	0.00	0.00
14.40	0.94	0.00	0.94	55.20	0.00	0.00	0.00
15.20	0.73	0.00	0.73	56.00	0.00	0.00	0.00
16.00	0.63	0.00	0.63	56.80	0.00	0.00	0.00
16.80	0.54	0.00	0.54	57.60	0.00	0.00	0.00
17.60	0.47	0.00	0.47	58.40	0.00	0.00	0.00
18.40	0.40	0.00	0.40	59.20	0.00	0.00	0.00
19.20	0.37	0.00	0.37	60.00	0.00	0.00	0.00
20.00	0.34	0.00	0.34	60.80	0.00	0.00	0.00
20.80	0.32	0.00	0.32	61.60	0.00	0.00	0.00
21.60	0.30	0.00	0.30	62.40	0.00	0.00	0.00
22.40	0.28	0.00	0.28	63.20	0.00	0.00	0.00
23.20	0.26	0.00	0.26	64.00	0.00	0.00	0.00
24.00	0.24	0.00	0.24	64.80	0.00	0.00	0.00
24.80	0.09	0.00	0.09	65.60	0.00	0.00	0.00
25.60	0.07	0.00	0.07	66.40	0.00	0.00	0.00
26.40	0.06	0.00	0.06	67.20	0.00	0.00	0.00
27.20	0.05	0.00	0.05	68.00	0.00	0.00	0.00
28.00	0.04	0.00	0.04	68.80	0.00	0.00	0.00
28.80	0.04	0.00	0.04	69.60	0.00	0.00	0.00
29.60	0.03	0.00	0.03	70.40	0.00	0.00	0.00
30.40	0.03	0.00	0.03	71.20	0.00	0.00	0.00
31.20	0.02	0.00	0.02	72.00	0.00	0.00	0.00
32.00	0.02	0.00	0.02	72.80	0.00	0.00	0.00
32.80	0.02	0.00	0.02	73.60	0.00	0.00	0.00
33.60	0.02	0.00	0.02	74.40	0.00	0.00	0.00
34.40	0.02	0.00	0.02	75.20	0.00	0.00	0.00
35.20	0.01	0.00	0.01	76.00	0.00	0.00	0.00
36.00	0.01	0.00	0.01	76.80	0.00	0.00	0.00
36.80	0.01	0.00	0.01	77.60	0.00	0.00	0.00
37.60	0.01	0.00	0.01	78.40	0.00	0.00	0.00
38.40	0.01	0.00	0.01	79.20	0.00	0.00	0.00
39.20	0.01	0.00	0.01	80.00	0.00	0.00	0.00
40.00	0.01	0.00	0.01				

Summary for Link 34L: DA 2 Undetained

Inflow Area = 177,655 sf, 29.56% Impervious, Inflow Depth = 1.92" for 2-Year event
Inflow = 7.56 cfs @ 12.16 hrs, Volume= 28,487 cf
Primary = 7.56 cfs @ 12.16 hrs, Volume= 28,487 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 28L : POA 2

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 34L: DA 2 Undetained



Hydrograph for Link 34L: DA 2 Undetained

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.00	0.00	0.00
0.80	0.00	0.00	0.00	41.60	0.00	0.00	0.00
1.60	0.01	0.00	0.01	42.40	0.00	0.00	0.00
2.40	0.02	0.00	0.02	43.20	0.00	0.00	0.00
3.20	0.03	0.00	0.03	44.00	0.00	0.00	0.00
4.00	0.04	0.00	0.04	44.80	0.00	0.00	0.00
4.80	0.05	0.00	0.05	45.60	0.00	0.00	0.00
5.60	0.05	0.00	0.05	46.40	0.00	0.00	0.00
6.40	0.06	0.00	0.06	47.20	0.00	0.00	0.00
7.20	0.08	0.00	0.08	48.00	0.00	0.00	0.00
8.00	0.10	0.00	0.10	48.80	0.00	0.00	0.00
8.80	0.11	0.00	0.11	49.60	0.00	0.00	0.00
9.60	0.15	0.00	0.15	50.40	0.00	0.00	0.00
10.40	0.25	0.00	0.25	51.20	0.00	0.00	0.00
11.20	0.56	0.00	0.56	52.00	0.00	0.00	0.00
12.00	**3.34**	0.00	**3.34**	52.80	0.00	0.00	0.00
12.80	**1.28**	0.00	**1.28**	53.60	0.00	0.00	0.00
13.60	0.64	0.00	0.64	54.40	0.00	0.00	0.00
14.40	0.47	0.00	0.47	55.20	0.00	0.00	0.00
15.20	0.34	0.00	0.34	56.00	0.00	0.00	0.00
16.00	0.30	0.00	0.30	56.80	0.00	0.00	0.00
16.80	0.26	0.00	0.26	57.60	0.00	0.00	0.00
17.60	0.23	0.00	0.23	58.40	0.00	0.00	0.00
18.40	0.19	0.00	0.19	59.20	0.00	0.00	0.00
19.20	0.19	0.00	0.19	60.00	0.00	0.00	0.00
20.00	0.18	0.00	0.18	60.80	0.00	0.00	0.00
20.80	0.17	0.00	0.17	61.60	0.00	0.00	0.00
21.60	0.16	0.00	0.16	62.40	0.00	0.00	0.00
22.40	0.15	0.00	0.15	63.20	0.00	0.00	0.00
23.20	0.14	0.00	0.14	64.00	0.00	0.00	0.00
24.00	0.13	0.00	0.13	64.80	0.00	0.00	0.00
24.80	0.00	0.00	0.00	65.60	0.00	0.00	0.00
25.60	0.00	0.00	0.00	66.40	0.00	0.00	0.00
26.40	0.00	0.00	0.00	67.20	0.00	0.00	0.00
27.20	0.00	0.00	0.00	68.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	68.80	0.00	0.00	0.00
28.80	0.00	0.00	0.00	69.60	0.00	0.00	0.00
29.60	0.00	0.00	0.00	70.40	0.00	0.00	0.00
30.40	0.00	0.00	0.00	71.20	0.00	0.00	0.00
31.20	0.00	0.00	0.00	72.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	72.80	0.00	0.00	0.00
32.80	0.00	0.00	0.00	73.60	0.00	0.00	0.00
33.60	0.00	0.00	0.00	74.40	0.00	0.00	0.00
34.40	0.00	0.00	0.00	75.20	0.00	0.00	0.00
35.20	0.00	0.00	0.00	76.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	76.80	0.00	0.00	0.00
36.80	0.00	0.00	0.00	77.60	0.00	0.00	0.00
37.60	0.00	0.00	0.00	78.40	0.00	0.00	0.00
38.40	0.00	0.00	0.00	79.20	0.00	0.00	0.00
39.20	0.00	0.00	0.00	80.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00				

Summary for Subcatchment 19S: Basin 3 - Imp

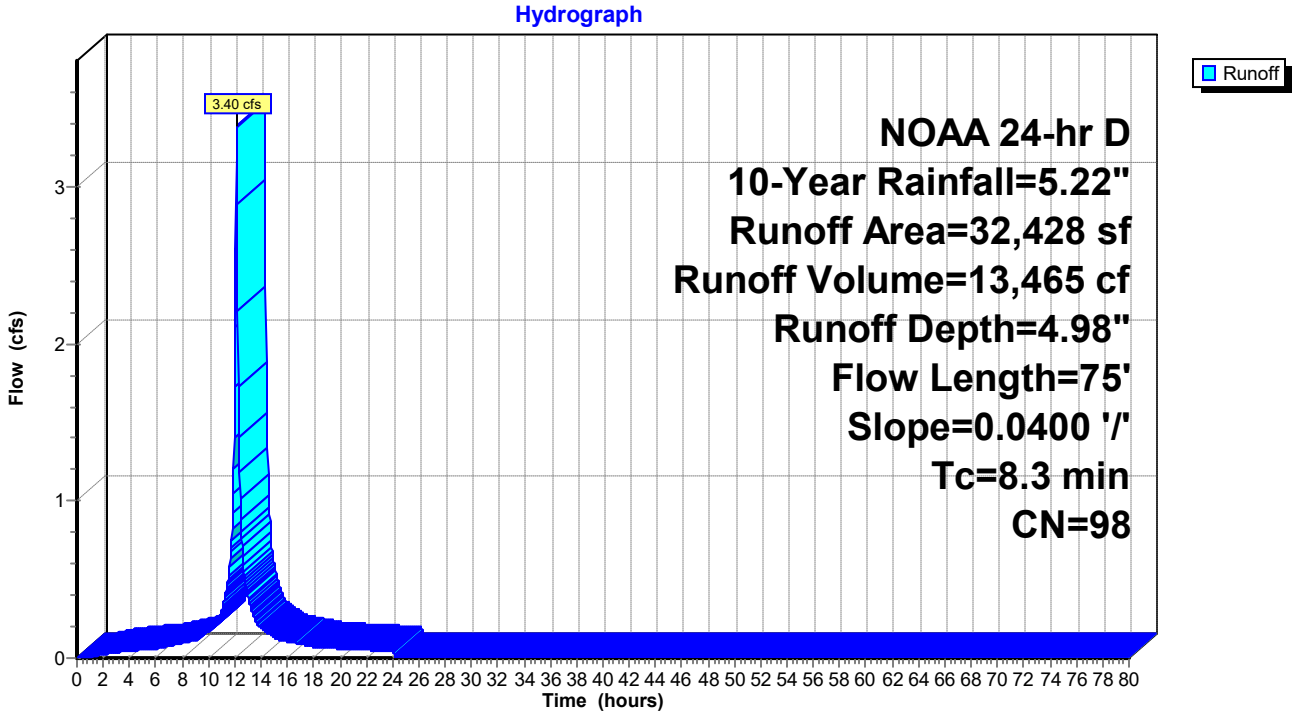
Runoff = 3.40 cfs @ 12.15 hrs, Volume= 13,465 cf, Depth= 4.98"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
18,295	98	Roofs, HSG C
7,163	98	Paved parking, HSG C
32,428	98	Weighted Average
32,428		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 19S: Basin 3 - Imp



Hydrograph for Subcatchment 19S: Basin 3 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.02	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.03	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.04	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.05	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.05	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.06	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.07	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.08	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.10	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.11	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.15	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.20	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.37	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**1.73**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.48**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.23	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.17	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.12	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.11	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.09	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.08	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.07	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.06	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.06	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.06	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.05	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.05	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.05	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.04	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 20S: Basin 3 - Perv

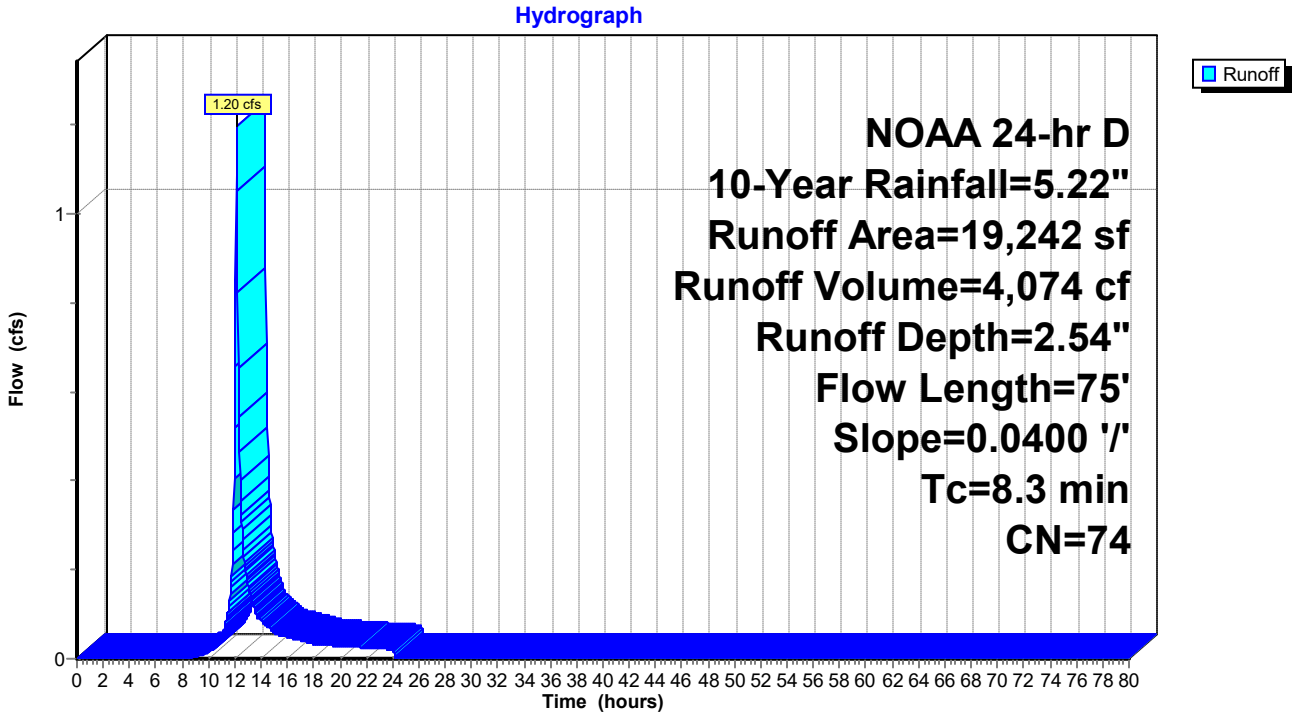
Runoff = 1.20 cfs @ 12.16 hrs, Volume= 4,074 cf, Depth= 2.54"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
19,242	74	>75% Grass cover, Good, HSG C
19,242		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 20S: Basin 3 - Perv



Hydrograph for Subcatchment 20S: Basin 3 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.54	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.54	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.54	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.54	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.54	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.54	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.54	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.54	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.54	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.54	0.00
8.00	0.68	0.00	0.00	48.80	5.22	2.54	0.00
8.80	0.80	0.00	0.00	49.60	5.22	2.54	0.00
9.60	0.94	0.02	0.01	50.40	5.22	2.54	0.00
10.40	1.14	0.05	0.02	51.20	5.22	2.54	0.00
11.20	1.46	0.13	0.07	52.00	5.22	2.54	0.00
12.00	2.50	0.61	**0.52**	52.80	5.22	2.54	0.00
12.80	3.76	1.42	**0.20**	53.60	5.22	2.54	0.00
13.60	4.08	1.65	0.10	54.40	5.22	2.54	0.00
14.40	4.28	1.80	0.08	55.20	5.22	2.54	0.00
15.20	4.42	1.91	0.05	56.00	5.22	2.54	0.00
16.00	4.54	2.01	0.05	56.80	5.22	2.54	0.00
16.80	4.65	2.09	0.04	57.60	5.22	2.54	0.00
17.60	4.74	2.16	0.04	58.40	5.22	2.54	0.00
18.40	4.81	2.21	0.03	59.20	5.22	2.54	0.00
19.20	4.88	2.27	0.03	60.00	5.22	2.54	0.00
20.00	4.95	2.32	0.03	60.80	5.22	2.54	0.00
20.80	5.01	2.37	0.03	61.60	5.22	2.54	0.00
21.60	5.07	2.42	0.03	62.40	5.22	2.54	0.00
22.40	5.12	2.46	0.02	63.20	5.22	2.54	0.00
23.20	5.17	2.50	0.02	64.00	5.22	2.54	0.00
24.00	**5.22**	**2.54**	0.02	64.80	5.22	2.54	0.00
24.80	5.22	2.54	0.00	65.60	5.22	2.54	0.00
25.60	5.22	2.54	0.00	66.40	5.22	2.54	0.00
26.40	5.22	2.54	0.00	67.20	5.22	2.54	0.00
27.20	5.22	2.54	0.00	68.00	5.22	2.54	0.00
28.00	5.22	2.54	0.00	68.80	5.22	2.54	0.00
28.80	5.22	2.54	0.00	69.60	5.22	2.54	0.00
29.60	5.22	2.54	0.00	70.40	5.22	2.54	0.00
30.40	5.22	2.54	0.00	71.20	5.22	2.54	0.00
31.20	5.22	2.54	0.00	72.00	5.22	2.54	0.00
32.00	5.22	2.54	0.00	72.80	5.22	2.54	0.00
32.80	5.22	2.54	0.00	73.60	5.22	2.54	0.00
33.60	5.22	2.54	0.00	74.40	5.22	2.54	0.00
34.40	5.22	2.54	0.00	75.20	5.22	2.54	0.00
35.20	5.22	2.54	0.00	76.00	5.22	2.54	0.00
36.00	5.22	2.54	0.00	76.80	5.22	2.54	0.00
36.80	5.22	2.54	0.00	77.60	5.22	2.54	0.00
37.60	5.22	2.54	0.00	78.40	5.22	2.54	0.00
38.40	5.22	2.54	0.00	79.20	5.22	2.54	0.00
39.20	5.22	2.54	0.00	80.00	5.22	2.54	0.00
40.00	5.22	2.54	0.00				

Summary for Subcatchment 21S: Basin 4 - Imp

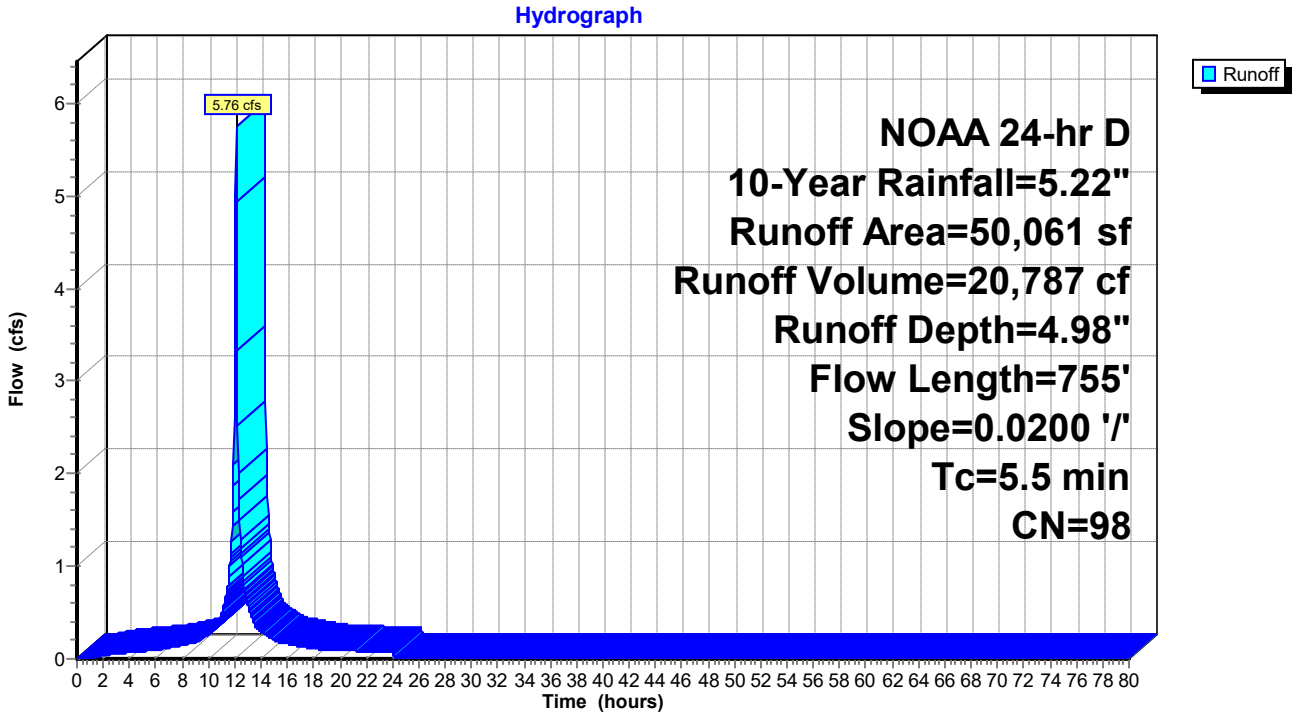
Runoff = 5.76 cfs @ 12.12 hrs, Volume= 20,787 cf, Depth= 4.98"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
43,091	98	Paved parking, HSG C
50,061	98	Weighted Average
50,061		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 21S: Basin 4 - Imp



Hydrograph for Subcatchment 21S: Basin 4 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.03	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.05	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.06	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.07	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.08	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.09	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.10	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.13	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.15	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.17	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.23	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.31	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.60	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**3.28**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.71**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.34	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.26	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.18	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.16	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.14	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.12	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.10	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.10	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.09	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.09	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.08	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.08	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.07	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.07	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 24S: Basin 4 - Perv

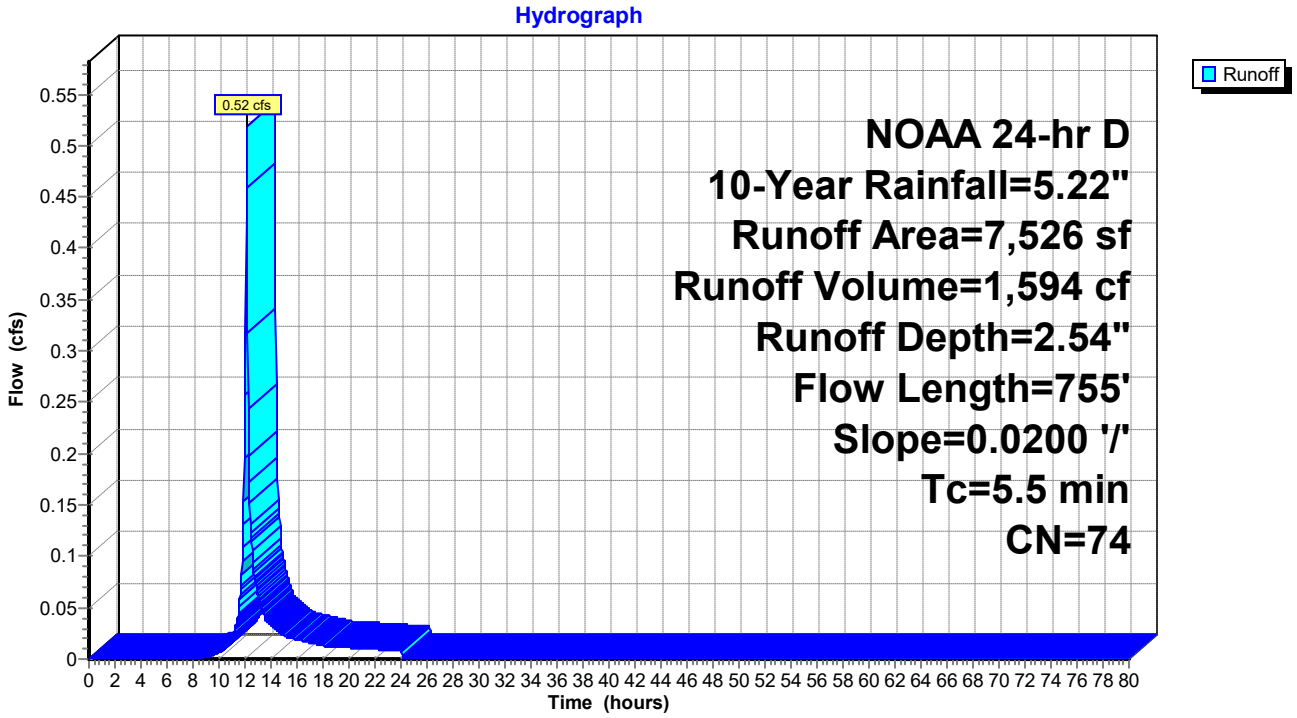
Runoff = 0.52 cfs @ 12.12 hrs, Volume= 1,594 cf, Depth= 2.54"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
7,526	74	>75% Grass cover, Good, HSG C
7,526		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 24S: Basin 4 - Perv



Hydrograph for Subcatchment 24S: Basin 4 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.54	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.54	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.54	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.54	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.54	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.54	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.54	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.54	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.54	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.54	0.00
8.00	0.68	0.00	0.00	48.80	5.22	2.54	0.00
8.80	0.80	0.00	0.00	49.60	5.22	2.54	0.00
9.60	0.94	0.02	0.00	50.40	5.22	2.54	0.00
10.40	1.14	0.05	0.01	51.20	5.22	2.54	0.00
11.20	1.46	0.13	0.03	52.00	5.22	2.54	0.00
12.00	2.50	0.61	**0.26**	52.80	5.22	2.54	0.00
12.80	3.76	1.42	**0.08**	53.60	5.22	2.54	0.00
13.60	4.08	1.65	0.04	54.40	5.22	2.54	0.00
14.40	4.28	1.80	0.03	55.20	5.22	2.54	0.00
15.20	4.42	1.91	0.02	56.00	5.22	2.54	0.00
16.00	4.54	2.01	0.02	56.80	5.22	2.54	0.00
16.80	4.65	2.09	0.02	57.60	5.22	2.54	0.00
17.60	4.74	2.16	0.01	58.40	5.22	2.54	0.00
18.40	4.81	2.21	0.01	59.20	5.22	2.54	0.00
19.20	4.88	2.27	0.01	60.00	5.22	2.54	0.00
20.00	4.95	2.32	0.01	60.80	5.22	2.54	0.00
20.80	5.01	2.37	0.01	61.60	5.22	2.54	0.00
21.60	5.07	2.42	0.01	62.40	5.22	2.54	0.00
22.40	5.12	2.46	0.01	63.20	5.22	2.54	0.00
23.20	5.17	2.50	0.01	64.00	5.22	2.54	0.00
24.00	**5.22**	**2.54**	0.01	64.80	5.22	2.54	0.00
24.80	5.22	2.54	0.00	65.60	5.22	2.54	0.00
25.60	5.22	2.54	0.00	66.40	5.22	2.54	0.00
26.40	5.22	2.54	0.00	67.20	5.22	2.54	0.00
27.20	5.22	2.54	0.00	68.00	5.22	2.54	0.00
28.00	5.22	2.54	0.00	68.80	5.22	2.54	0.00
28.80	5.22	2.54	0.00	69.60	5.22	2.54	0.00
29.60	5.22	2.54	0.00	70.40	5.22	2.54	0.00
30.40	5.22	2.54	0.00	71.20	5.22	2.54	0.00
31.20	5.22	2.54	0.00	72.00	5.22	2.54	0.00
32.00	5.22	2.54	0.00	72.80	5.22	2.54	0.00
32.80	5.22	2.54	0.00	73.60	5.22	2.54	0.00
33.60	5.22	2.54	0.00	74.40	5.22	2.54	0.00
34.40	5.22	2.54	0.00	75.20	5.22	2.54	0.00
35.20	5.22	2.54	0.00	76.00	5.22	2.54	0.00
36.00	5.22	2.54	0.00	76.80	5.22	2.54	0.00
36.80	5.22	2.54	0.00	77.60	5.22	2.54	0.00
37.60	5.22	2.54	0.00	78.40	5.22	2.54	0.00
38.40	5.22	2.54	0.00	79.20	5.22	2.54	0.00
39.20	5.22	2.54	0.00	80.00	5.22	2.54	0.00
40.00	5.22	2.54	0.00				

Summary for Subcatchment 25S: Basin 2 - Perv

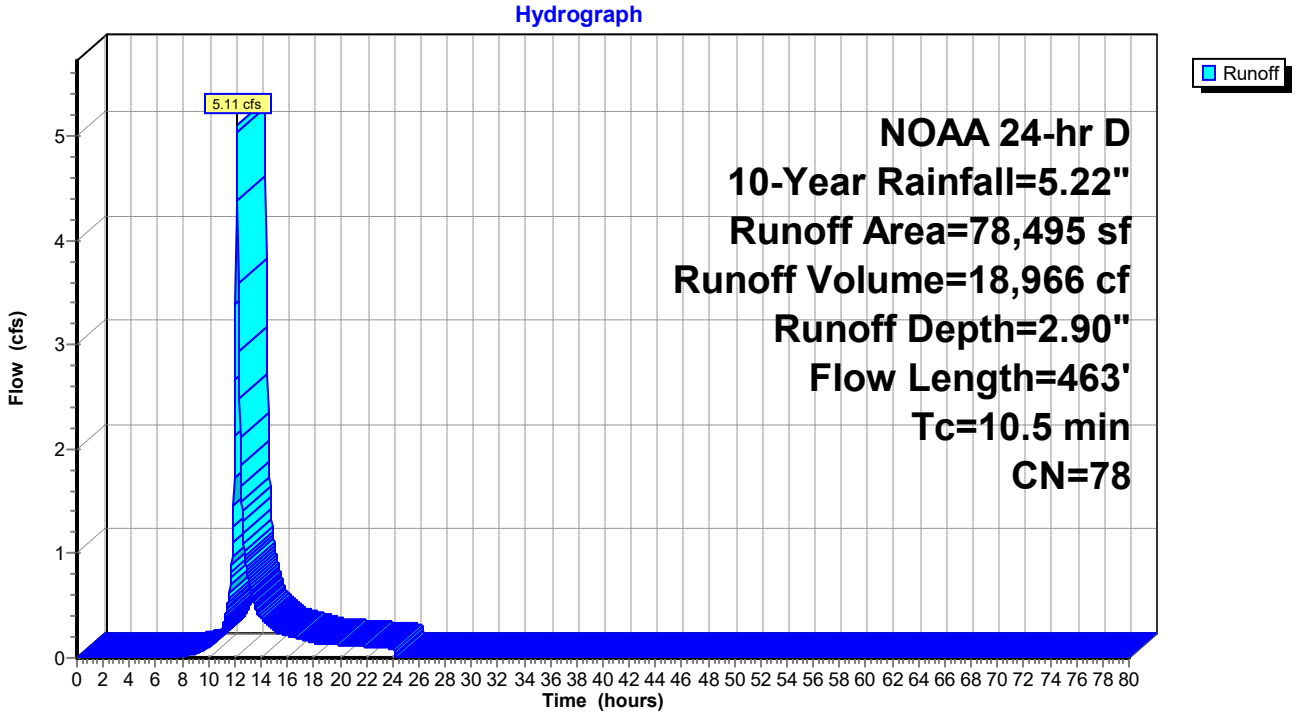
Runoff = 5.11 cfs @ 12.18 hrs, Volume= 18,966 cf, Depth= 2.90"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
47,097	80	>75% Grass cover, Good, HSG D
31,398	74	>75% Grass cover, Good, HSG C
78,495	78	Weighted Average
78,495		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 25S: Basin 2 - Perv



Hydrograph for Subcatchment 25S: Basin 2 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.90	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.90	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.90	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.90	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.90	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.90	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.90	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.90	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.90	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.90	0.00
8.00	0.68	0.00	0.02	48.80	5.22	2.90	0.00
8.80	0.80	0.02	0.04	49.60	5.22	2.90	0.00
9.60	0.94	0.04	0.08	50.40	5.22	2.90	0.00
10.40	1.14	0.10	0.14	51.20	5.22	2.90	0.00
11.20	1.46	0.22	0.35	52.00	5.22	2.90	0.00
12.00	2.50	0.79	**2.13**	52.80	5.22	2.90	0.00
12.80	3.76	1.70	**0.94**	53.60	5.22	2.90	0.00
13.60	4.08	1.95	0.46	54.40	5.22	2.90	0.00
14.40	4.28	2.11	0.34	55.20	5.22	2.90	0.00
15.20	4.42	2.23	0.24	56.00	5.22	2.90	0.00
16.00	4.54	2.33	0.21	56.80	5.22	2.90	0.00
16.80	4.65	2.41	0.19	57.60	5.22	2.90	0.00
17.60	4.74	2.49	0.16	58.40	5.22	2.90	0.00
18.40	4.81	2.55	0.14	59.20	5.22	2.90	0.00
19.20	4.88	2.61	0.13	60.00	5.22	2.90	0.00
20.00	4.95	2.67	0.12	60.80	5.22	2.90	0.00
20.80	5.01	2.72	0.12	61.60	5.22	2.90	0.00
21.60	5.07	2.77	0.11	62.40	5.22	2.90	0.00
22.40	5.12	2.82	0.10	63.20	5.22	2.90	0.00
23.20	5.17	2.86	0.10	64.00	5.22	2.90	0.00
24.00	**5.22**	**2.90**	0.09	64.80	5.22	2.90	0.00
24.80	5.22	2.90	0.00	65.60	5.22	2.90	0.00
25.60	5.22	2.90	0.00	66.40	5.22	2.90	0.00
26.40	5.22	2.90	0.00	67.20	5.22	2.90	0.00
27.20	5.22	2.90	0.00	68.00	5.22	2.90	0.00
28.00	5.22	2.90	0.00	68.80	5.22	2.90	0.00
28.80	5.22	2.90	0.00	69.60	5.22	2.90	0.00
29.60	5.22	2.90	0.00	70.40	5.22	2.90	0.00
30.40	5.22	2.90	0.00	71.20	5.22	2.90	0.00
31.20	5.22	2.90	0.00	72.00	5.22	2.90	0.00
32.00	5.22	2.90	0.00	72.80	5.22	2.90	0.00
32.80	5.22	2.90	0.00	73.60	5.22	2.90	0.00
33.60	5.22	2.90	0.00	74.40	5.22	2.90	0.00
34.40	5.22	2.90	0.00	75.20	5.22	2.90	0.00
35.20	5.22	2.90	0.00	76.00	5.22	2.90	0.00
36.00	5.22	2.90	0.00	76.80	5.22	2.90	0.00
36.80	5.22	2.90	0.00	77.60	5.22	2.90	0.00
37.60	5.22	2.90	0.00	78.40	5.22	2.90	0.00
38.40	5.22	2.90	0.00	79.20	5.22	2.90	0.00
39.20	5.22	2.90	0.00	80.00	5.22	2.90	0.00
40.00	5.22	2.90	0.00				

Summary for Subcatchment 28S: Basin 2 - Imp

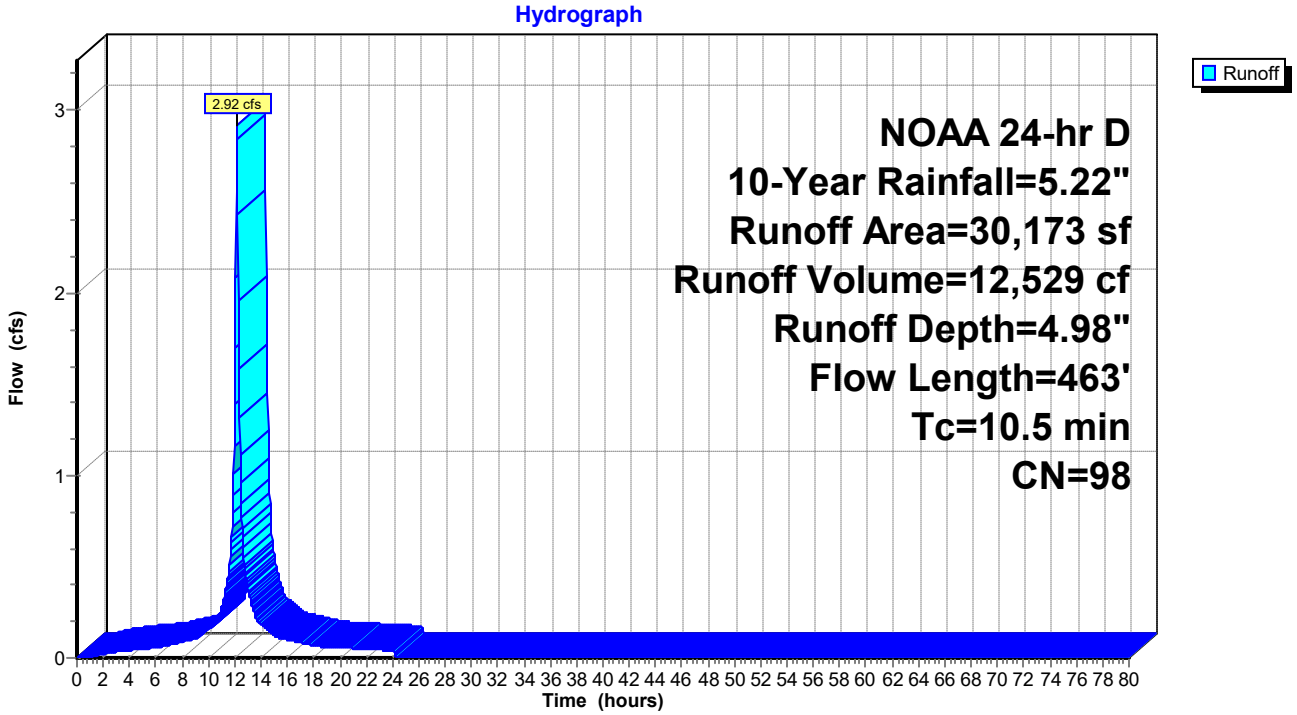
Runoff = 2.92 cfs @ 12.17 hrs, Volume= 12,529 cf, Depth= 4.98"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
28,866	98	Paved parking, HSG C
1,307	98	Paved parking, HSG D
30,173	98	Weighted Average
30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 28S: Basin 2 - Imp



Hydrograph for Subcatchment 28S: Basin 2 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.02	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.03	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.04	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.04	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.05	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.05	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.06	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.07	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.09	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.10	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.14	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.18	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.33	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**1.40**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.46**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.22	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.16	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.11	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.10	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.09	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.07	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.06	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.06	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.06	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.05	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.05	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.05	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.04	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.04	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 29S: Basin 8 - Imp

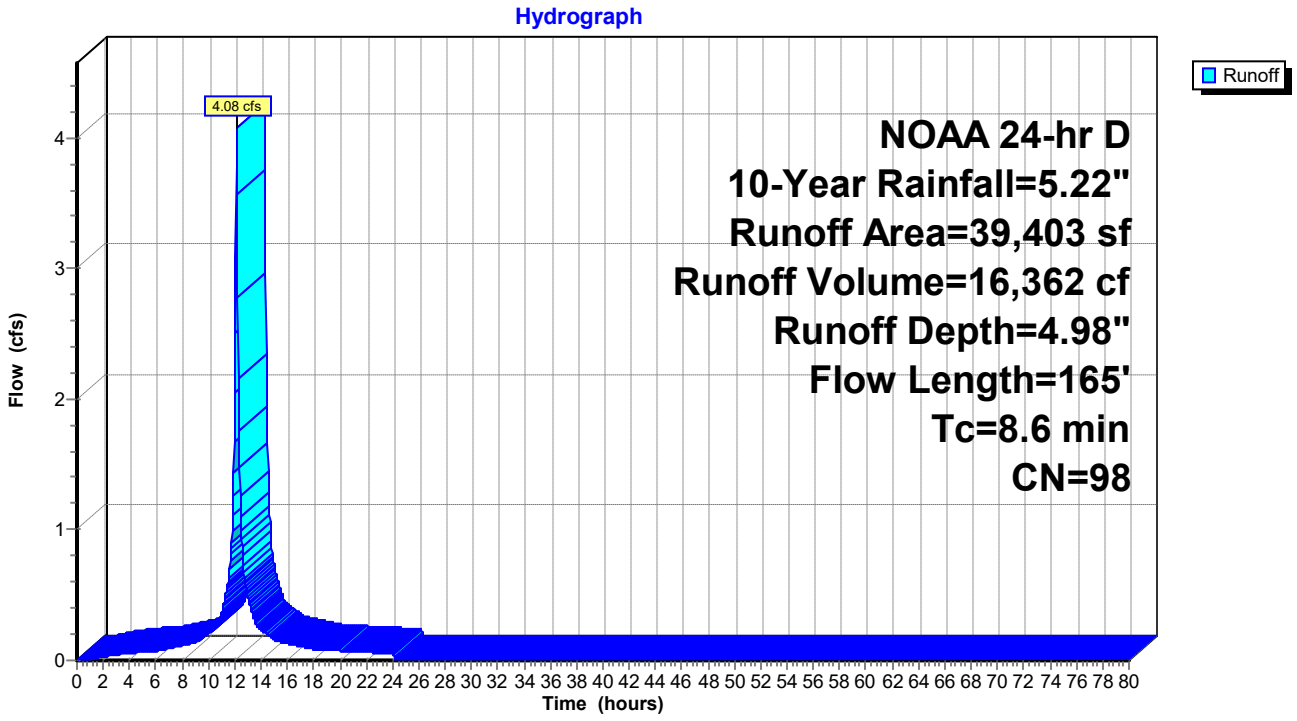
Runoff = 4.08 cfs @ 12.15 hrs, Volume= 16,362 cf, Depth= 4.98"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
24,632	98	Paved parking, HSG C
14,771	98	Paved parking, HSG D
39,403	98	Weighted Average
39,403		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 29S: Basin 8 - Imp



Hydrograph for Subcatchment 29S: Basin 8 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.02	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.04	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.05	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.06	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.06	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.07	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.08	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.10	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.12	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.13	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.18	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.24	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.45	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**2.06**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.59**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.28	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.21	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.15	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.13	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.11	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.10	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.08	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.08	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.07	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.07	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.07	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.06	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.06	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.05	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 30S: Basin 8 - Perv

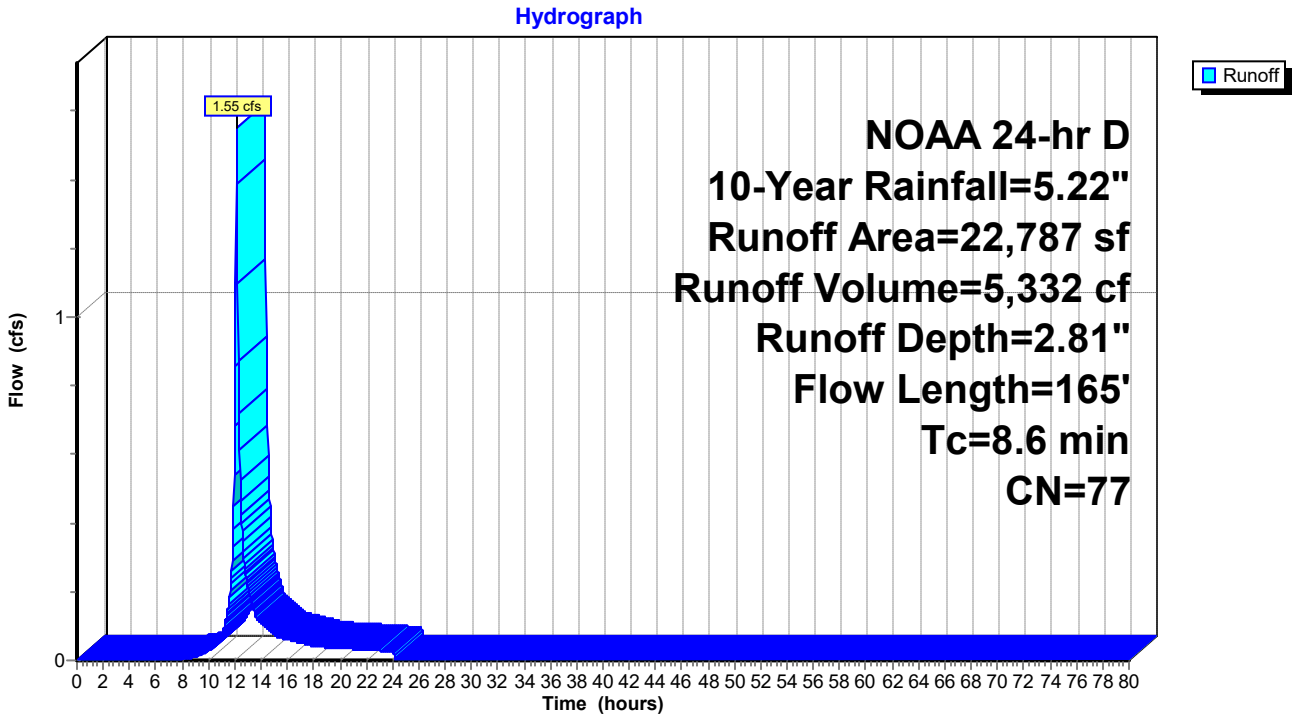
Runoff = 1.55 cfs @ 12.16 hrs, Volume= 5,332 cf, Depth= 2.81"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
11,542	80	>75% Grass cover, Good, HSG D
11,245	74	>75% Grass cover, Good, HSG C
22,787	77	Weighted Average
22,787		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 30S: Basin 8 - Perv



Hydrograph for Subcatchment 30S: Basin 8 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.81	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.81	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.81	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.81	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.81	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.81	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.81	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.81	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.81	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.81	0.00
8.00	0.68	0.00	0.00	48.80	5.22	2.81	0.00
8.80	0.80	0.01	0.01	49.60	5.22	2.81	0.00
9.60	0.94	0.04	0.02	50.40	5.22	2.81	0.00
10.40	1.14	0.08	0.04	51.20	5.22	2.81	0.00
11.20	1.46	0.19	0.10	52.00	5.22	2.81	0.00
12.00	2.50	0.74	**0.68**	52.80	5.22	2.81	0.00
12.80	3.76	1.63	**0.26**	53.60	5.22	2.81	0.00
13.60	4.08	1.87	0.13	54.40	5.22	2.81	0.00
14.40	4.28	2.03	0.10	55.20	5.22	2.81	0.00
15.20	4.42	2.15	0.07	56.00	5.22	2.81	0.00
16.00	4.54	2.25	0.06	56.80	5.22	2.81	0.00
16.80	4.65	2.33	0.05	57.60	5.22	2.81	0.00
17.60	4.74	2.40	0.05	58.40	5.22	2.81	0.00
18.40	4.81	2.47	0.04	59.20	5.22	2.81	0.00
19.20	4.88	2.52	0.04	60.00	5.22	2.81	0.00
20.00	4.95	2.58	0.04	60.80	5.22	2.81	0.00
20.80	5.01	2.63	0.03	61.60	5.22	2.81	0.00
21.60	5.07	2.68	0.03	62.40	5.22	2.81	0.00
22.40	5.12	2.73	0.03	63.20	5.22	2.81	0.00
23.20	5.17	2.77	0.03	64.00	5.22	2.81	0.00
24.00	**5.22**	**2.81**	0.03	64.80	5.22	2.81	0.00
24.80	5.22	2.81	0.00	65.60	5.22	2.81	0.00
25.60	5.22	2.81	0.00	66.40	5.22	2.81	0.00
26.40	5.22	2.81	0.00	67.20	5.22	2.81	0.00
27.20	5.22	2.81	0.00	68.00	5.22	2.81	0.00
28.00	5.22	2.81	0.00	68.80	5.22	2.81	0.00
28.80	5.22	2.81	0.00	69.60	5.22	2.81	0.00
29.60	5.22	2.81	0.00	70.40	5.22	2.81	0.00
30.40	5.22	2.81	0.00	71.20	5.22	2.81	0.00
31.20	5.22	2.81	0.00	72.00	5.22	2.81	0.00
32.00	5.22	2.81	0.00	72.80	5.22	2.81	0.00
32.80	5.22	2.81	0.00	73.60	5.22	2.81	0.00
33.60	5.22	2.81	0.00	74.40	5.22	2.81	0.00
34.40	5.22	2.81	0.00	75.20	5.22	2.81	0.00
35.20	5.22	2.81	0.00	76.00	5.22	2.81	0.00
36.00	5.22	2.81	0.00	76.80	5.22	2.81	0.00
36.80	5.22	2.81	0.00	77.60	5.22	2.81	0.00
37.60	5.22	2.81	0.00	78.40	5.22	2.81	0.00
38.40	5.22	2.81	0.00	79.20	5.22	2.81	0.00
39.20	5.22	2.81	0.00	80.00	5.22	2.81	0.00
40.00	5.22	2.81	0.00				

Summary for Subcatchment 31S: Basin 7 - Imp

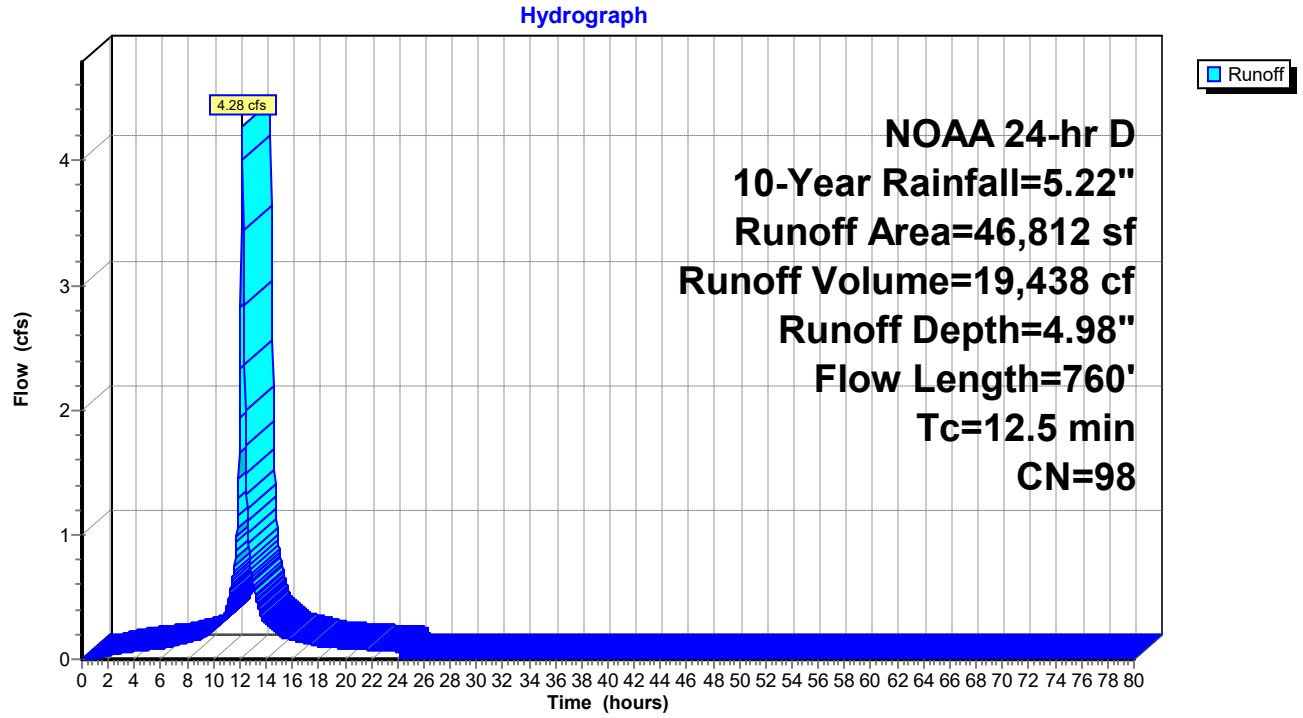
Runoff = 4.28 cfs @ 12.20 hrs, Volume= 19,438 cf, Depth= 4.98"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
15,723	98	Paved parking, HSG D
31,089	98	Paved parking, HSG C
46,812	98	Weighted Average
46,812		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 31S: Basin 7 - Imp



Hydrograph for Subcatchment 31S: Basin 7 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.02	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.04	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.05	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.07	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.07	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.08	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.09	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.12	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.14	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.16	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.21	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.28	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.50	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**1.95**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.75**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.36	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.25	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.18	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.16	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.14	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.12	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.10	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.09	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.09	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.08	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.08	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.07	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.07	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.06	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 32S: Basin 7 - Perv

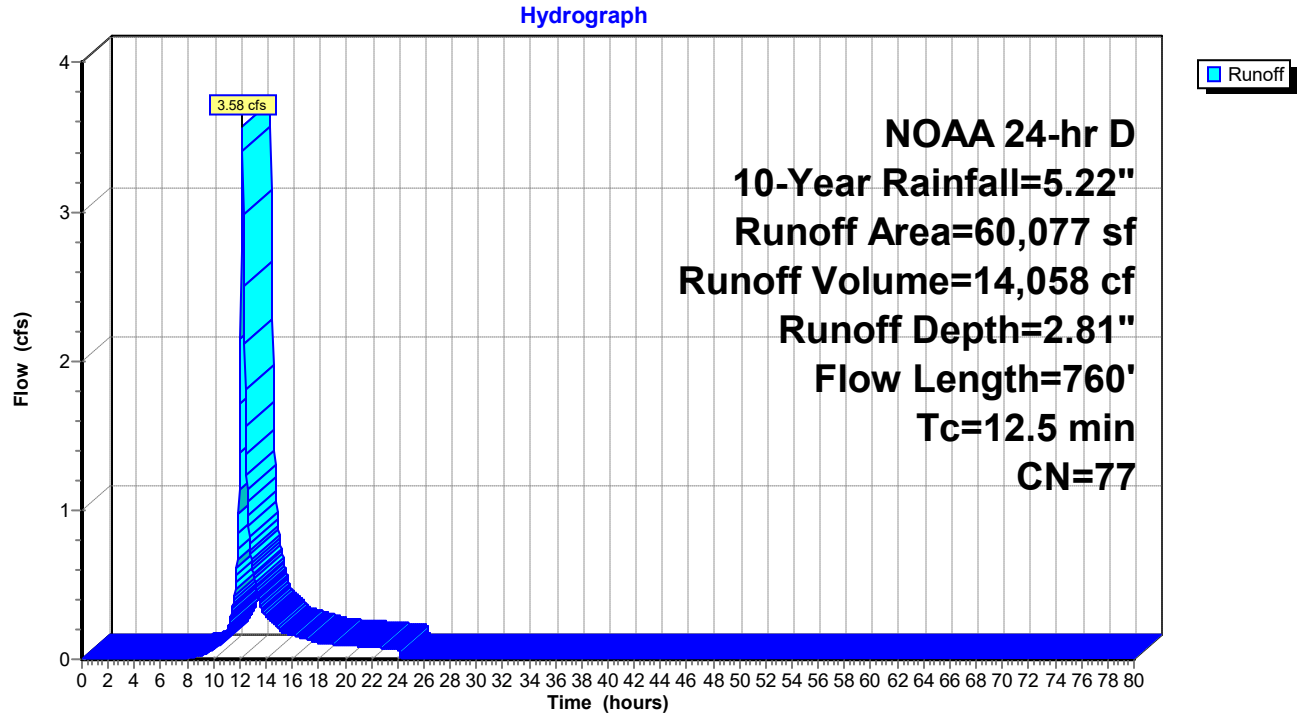
Runoff = 3.58 cfs @ 12.20 hrs, Volume= 14,058 cf, Depth= 2.81"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
25,517	80	>75% Grass cover, Good, HSG D
34,560	74	>75% Grass cover, Good, HSG C
60,077	77	Weighted Average
60,077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 32S: Basin 7 - Perv



Hydrograph for Subcatchment 32S: Basin 7 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.81	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.81	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.81	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.81	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.81	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.81	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.81	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.81	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.81	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.81	0.00
8.00	0.68	0.00	0.01	48.80	5.22	2.81	0.00
8.80	0.80	0.01	0.02	49.60	5.22	2.81	0.00
9.60	0.94	0.04	0.05	50.40	5.22	2.81	0.00
10.40	1.14	0.08	0.10	51.20	5.22	2.81	0.00
11.20	1.46	0.19	0.24	52.00	5.22	2.81	0.00
12.00	2.50	0.74	**1.38**	52.80	5.22	2.81	0.00
12.80	3.76	1.63	**0.73**	53.60	5.22	2.81	0.00
13.60	4.08	1.87	0.36	54.40	5.22	2.81	0.00
14.40	4.28	2.03	0.26	55.20	5.22	2.81	0.00
15.20	4.42	2.15	0.19	56.00	5.22	2.81	0.00
16.00	4.54	2.25	0.16	56.80	5.22	2.81	0.00
16.80	4.65	2.33	0.14	57.60	5.22	2.81	0.00
17.60	4.74	2.40	0.12	58.40	5.22	2.81	0.00
18.40	4.81	2.47	0.10	59.20	5.22	2.81	0.00
19.20	4.88	2.52	0.10	60.00	5.22	2.81	0.00
20.00	4.95	2.58	0.09	60.80	5.22	2.81	0.00
20.80	5.01	2.63	0.09	61.60	5.22	2.81	0.00
21.60	5.07	2.68	0.08	62.40	5.22	2.81	0.00
22.40	5.12	2.73	0.08	63.20	5.22	2.81	0.00
23.20	5.17	2.77	0.07	64.00	5.22	2.81	0.00
24.00	**5.22**	**2.81**	0.07	64.80	5.22	2.81	0.00
24.80	5.22	2.81	0.00	65.60	5.22	2.81	0.00
25.60	5.22	2.81	0.00	66.40	5.22	2.81	0.00
26.40	5.22	2.81	0.00	67.20	5.22	2.81	0.00
27.20	5.22	2.81	0.00	68.00	5.22	2.81	0.00
28.00	5.22	2.81	0.00	68.80	5.22	2.81	0.00
28.80	5.22	2.81	0.00	69.60	5.22	2.81	0.00
29.60	5.22	2.81	0.00	70.40	5.22	2.81	0.00
30.40	5.22	2.81	0.00	71.20	5.22	2.81	0.00
31.20	5.22	2.81	0.00	72.00	5.22	2.81	0.00
32.00	5.22	2.81	0.00	72.80	5.22	2.81	0.00
32.80	5.22	2.81	0.00	73.60	5.22	2.81	0.00
33.60	5.22	2.81	0.00	74.40	5.22	2.81	0.00
34.40	5.22	2.81	0.00	75.20	5.22	2.81	0.00
35.20	5.22	2.81	0.00	76.00	5.22	2.81	0.00
36.00	5.22	2.81	0.00	76.80	5.22	2.81	0.00
36.80	5.22	2.81	0.00	77.60	5.22	2.81	0.00
37.60	5.22	2.81	0.00	78.40	5.22	2.81	0.00
38.40	5.22	2.81	0.00	79.20	5.22	2.81	0.00
39.20	5.22	2.81	0.00	80.00	5.22	2.81	0.00
40.00	5.22	2.81	0.00				

Summary for Subcatchment 35S: DA 2 Und - Imp

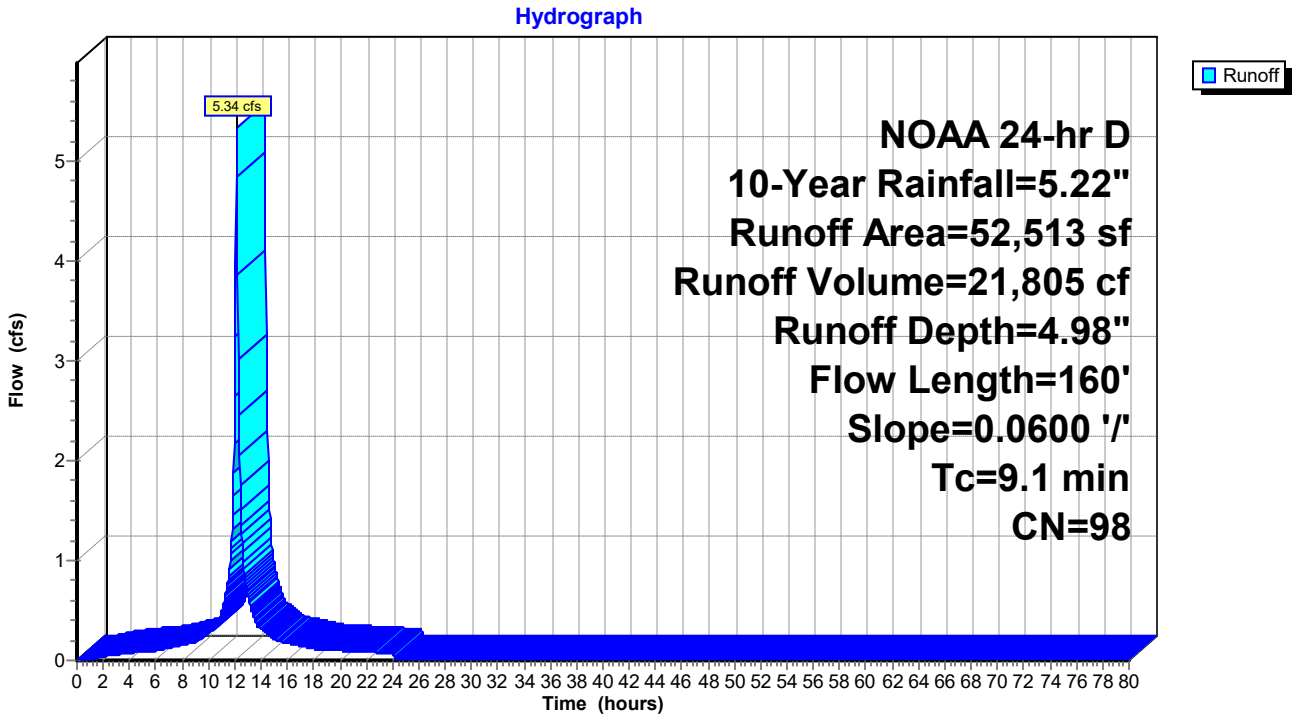
Runoff = 5.34 cfs @ 12.16 hrs, Volume= 21,805 cf, Depth= 4.98"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
19,504	98	Paved parking, HSG C
33,009	98	Paved parking, HSG D
52,513	98	Weighted Average
52,513		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 35S: DA 2 Und - Imp



Hydrograph for Subcatchment 35S: DA 2 Und - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.03	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.05	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.06	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.07	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.08	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.09	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.11	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.13	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.15	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.18	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.24	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.32	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.59	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**2.65**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.79**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.38	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.27	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.20	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.17	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.15	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.13	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.11	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.10	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.10	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.09	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.09	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.08	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.08	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.07	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 36S: DA 2 Und - Perv

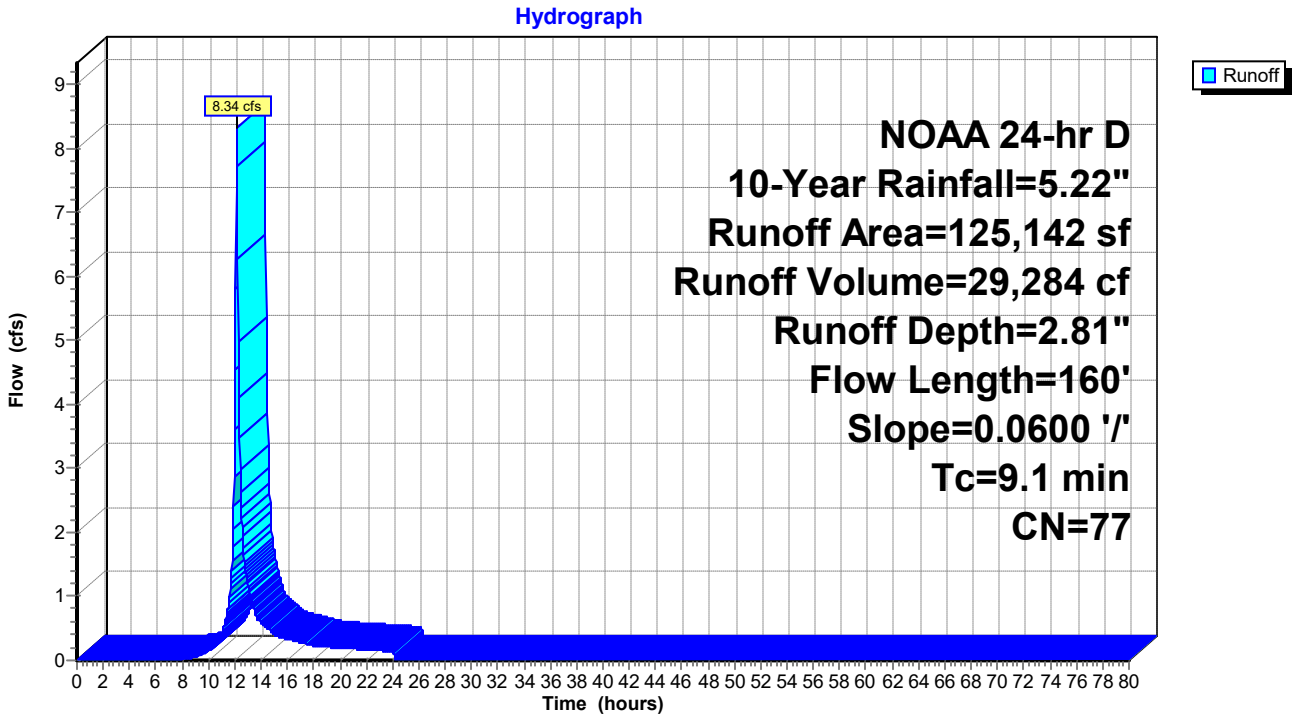
Runoff = 8.34 cfs @ 12.16 hrs, Volume= 29,284 cf, Depth= 2.81"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
57,417	80	>75% Grass cover, Good, HSG D
67,725	74	>75% Grass cover, Good, HSG C
125,142	77	Weighted Average
125,142		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 36S: DA 2 Und - Perv



Hydrograph for Subcatchment 36S: DA 2 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.81	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.81	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.81	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.81	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.81	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.81	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.81	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.81	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.81	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.81	0.00
8.00	0.68	0.00	0.02	48.80	5.22	2.81	0.00
8.80	0.80	0.01	0.05	49.60	5.22	2.81	0.00
9.60	0.94	0.04	0.11	50.40	5.22	2.81	0.00
10.40	1.14	0.08	0.21	51.20	5.22	2.81	0.00
11.20	1.46	0.19	0.54	52.00	5.22	2.81	0.00
12.00	2.50	0.74	**3.61**	52.80	5.22	2.81	0.00
12.80	3.76	1.63	**1.42**	53.60	5.22	2.81	0.00
13.60	4.08	1.87	0.71	54.40	5.22	2.81	0.00
14.40	4.28	2.03	0.52	55.20	5.22	2.81	0.00
15.20	4.42	2.15	0.38	56.00	5.22	2.81	0.00
16.00	4.54	2.25	0.34	56.80	5.22	2.81	0.00
16.80	4.65	2.33	0.29	57.60	5.22	2.81	0.00
17.60	4.74	2.40	0.25	58.40	5.22	2.81	0.00
18.40	4.81	2.47	0.22	59.20	5.22	2.81	0.00
19.20	4.88	2.52	0.21	60.00	5.22	2.81	0.00
20.00	4.95	2.58	0.20	60.80	5.22	2.81	0.00
20.80	5.01	2.63	0.18	61.60	5.22	2.81	0.00
21.60	5.07	2.68	0.17	62.40	5.22	2.81	0.00
22.40	5.12	2.73	0.16	63.20	5.22	2.81	0.00
23.20	5.17	2.77	0.15	64.00	5.22	2.81	0.00
24.00	**5.22**	**2.81**	0.14	64.80	5.22	2.81	0.00
24.80	5.22	2.81	0.00	65.60	5.22	2.81	0.00
25.60	5.22	2.81	0.00	66.40	5.22	2.81	0.00
26.40	5.22	2.81	0.00	67.20	5.22	2.81	0.00
27.20	5.22	2.81	0.00	68.00	5.22	2.81	0.00
28.00	5.22	2.81	0.00	68.80	5.22	2.81	0.00
28.80	5.22	2.81	0.00	69.60	5.22	2.81	0.00
29.60	5.22	2.81	0.00	70.40	5.22	2.81	0.00
30.40	5.22	2.81	0.00	71.20	5.22	2.81	0.00
31.20	5.22	2.81	0.00	72.00	5.22	2.81	0.00
32.00	5.22	2.81	0.00	72.80	5.22	2.81	0.00
32.80	5.22	2.81	0.00	73.60	5.22	2.81	0.00
33.60	5.22	2.81	0.00	74.40	5.22	2.81	0.00
34.40	5.22	2.81	0.00	75.20	5.22	2.81	0.00
35.20	5.22	2.81	0.00	76.00	5.22	2.81	0.00
36.00	5.22	2.81	0.00	76.80	5.22	2.81	0.00
36.80	5.22	2.81	0.00	77.60	5.22	2.81	0.00
37.60	5.22	2.81	0.00	78.40	5.22	2.81	0.00
38.40	5.22	2.81	0.00	79.20	5.22	2.81	0.00
39.20	5.22	2.81	0.00	80.00	5.22	2.81	0.00
40.00	5.22	2.81	0.00				

Summary for Subcatchment 45S: Basin 11 - Imp

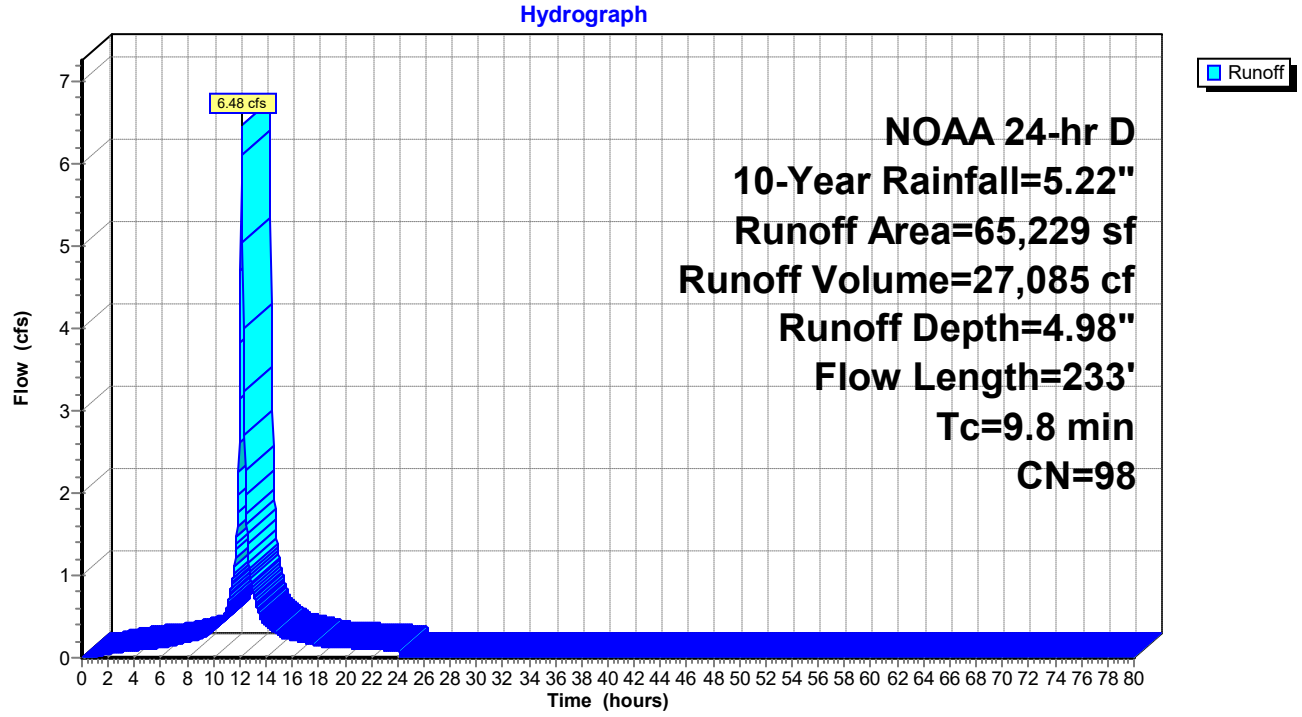
Runoff = 6.48 cfs @ 12.17 hrs, Volume= 27,085 cf, Depth= 4.98"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
4,356	98	Roofs, HSG D
7,377	98	Paved parking, HSG D
27,007	98	Roofs, HSG C
26,489	98	Paved parking, HSG C
65,229	98	Weighted Average
65,229		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 45S: Basin 11 - Imp



Hydrograph for Subcatchment 45S: Basin 11 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.03	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.06	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.08	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.09	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.10	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.12	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.13	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.16	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.19	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.22	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.29	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.39	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.73	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**3.16**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.99**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.48	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.34	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.25	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.21	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.19	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.16	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.14	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.13	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.12	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.12	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.11	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.10	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.09	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.09	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 46S: Basin 11 - Perv

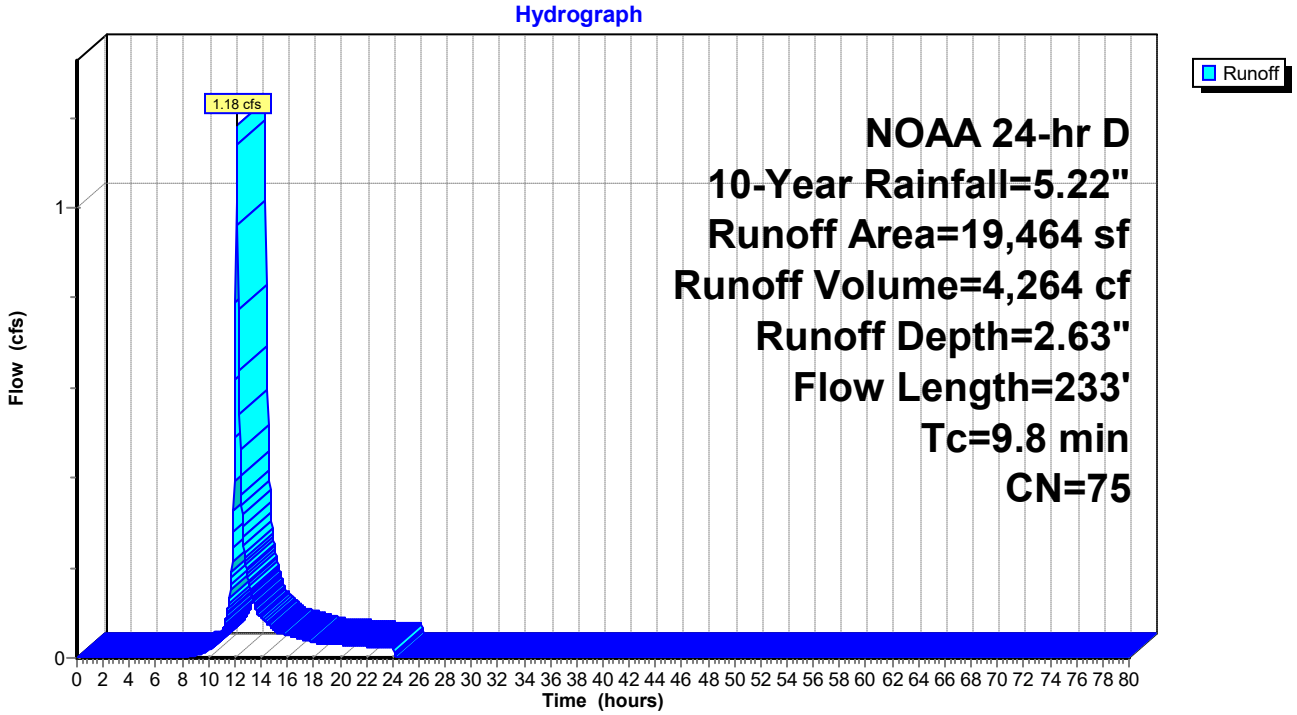
Runoff = 1.18 cfs @ 12.17 hrs, Volume= 4,264 cf, Depth= 2.63"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
2,920	80	>75% Grass cover, Good, HSG D
16,544	74	>75% Grass cover, Good, HSG C
19,464	75	Weighted Average
19,464		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 46S: Basin 11 - Perv



Hydrograph for Subcatchment 46S: Basin 11 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.63	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.63	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.63	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.63	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.63	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.63	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.63	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.63	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.63	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.63	0.00
8.00	0.68	0.00	0.00	48.80	5.22	2.63	0.00
8.80	0.80	0.00	0.00	49.60	5.22	2.63	0.00
9.60	0.94	0.02	0.01	50.40	5.22	2.63	0.00
10.40	1.14	0.06	0.03	51.20	5.22	2.63	0.00
11.20	1.46	0.15	0.07	52.00	5.22	2.63	0.00
12.00	2.50	0.65	**0.49**	52.80	5.22	2.63	0.00
12.80	3.76	1.49	**0.21**	53.60	5.22	2.63	0.00
13.60	4.08	1.73	0.11	54.40	5.22	2.63	0.00
14.40	4.28	1.88	0.08	55.20	5.22	2.63	0.00
15.20	4.42	1.99	0.06	56.00	5.22	2.63	0.00
16.00	4.54	2.08	0.05	56.80	5.22	2.63	0.00
16.80	4.65	2.17	0.04	57.60	5.22	2.63	0.00
17.60	4.74	2.24	0.04	58.40	5.22	2.63	0.00
18.40	4.81	2.30	0.03	59.20	5.22	2.63	0.00
19.20	4.88	2.35	0.03	60.00	5.22	2.63	0.00
20.00	4.95	2.41	0.03	60.80	5.22	2.63	0.00
20.80	5.01	2.46	0.03	61.60	5.22	2.63	0.00
21.60	5.07	2.50	0.03	62.40	5.22	2.63	0.00
22.40	5.12	2.55	0.02	63.20	5.22	2.63	0.00
23.20	5.17	2.59	0.02	64.00	5.22	2.63	0.00
24.00	**5.22**	**2.63**	0.02	64.80	5.22	2.63	0.00
24.80	5.22	2.63	0.00	65.60	5.22	2.63	0.00
25.60	5.22	2.63	0.00	66.40	5.22	2.63	0.00
26.40	5.22	2.63	0.00	67.20	5.22	2.63	0.00
27.20	5.22	2.63	0.00	68.00	5.22	2.63	0.00
28.00	5.22	2.63	0.00	68.80	5.22	2.63	0.00
28.80	5.22	2.63	0.00	69.60	5.22	2.63	0.00
29.60	5.22	2.63	0.00	70.40	5.22	2.63	0.00
30.40	5.22	2.63	0.00	71.20	5.22	2.63	0.00
31.20	5.22	2.63	0.00	72.00	5.22	2.63	0.00
32.00	5.22	2.63	0.00	72.80	5.22	2.63	0.00
32.80	5.22	2.63	0.00	73.60	5.22	2.63	0.00
33.60	5.22	2.63	0.00	74.40	5.22	2.63	0.00
34.40	5.22	2.63	0.00	75.20	5.22	2.63	0.00
35.20	5.22	2.63	0.00	76.00	5.22	2.63	0.00
36.00	5.22	2.63	0.00	76.80	5.22	2.63	0.00
36.80	5.22	2.63	0.00	77.60	5.22	2.63	0.00
37.60	5.22	2.63	0.00	78.40	5.22	2.63	0.00
38.40	5.22	2.63	0.00	79.20	5.22	2.63	0.00
39.20	5.22	2.63	0.00	80.00	5.22	2.63	0.00
40.00	5.22	2.63	0.00				

Summary for Subcatchment 51S: Basin 10 - Imp

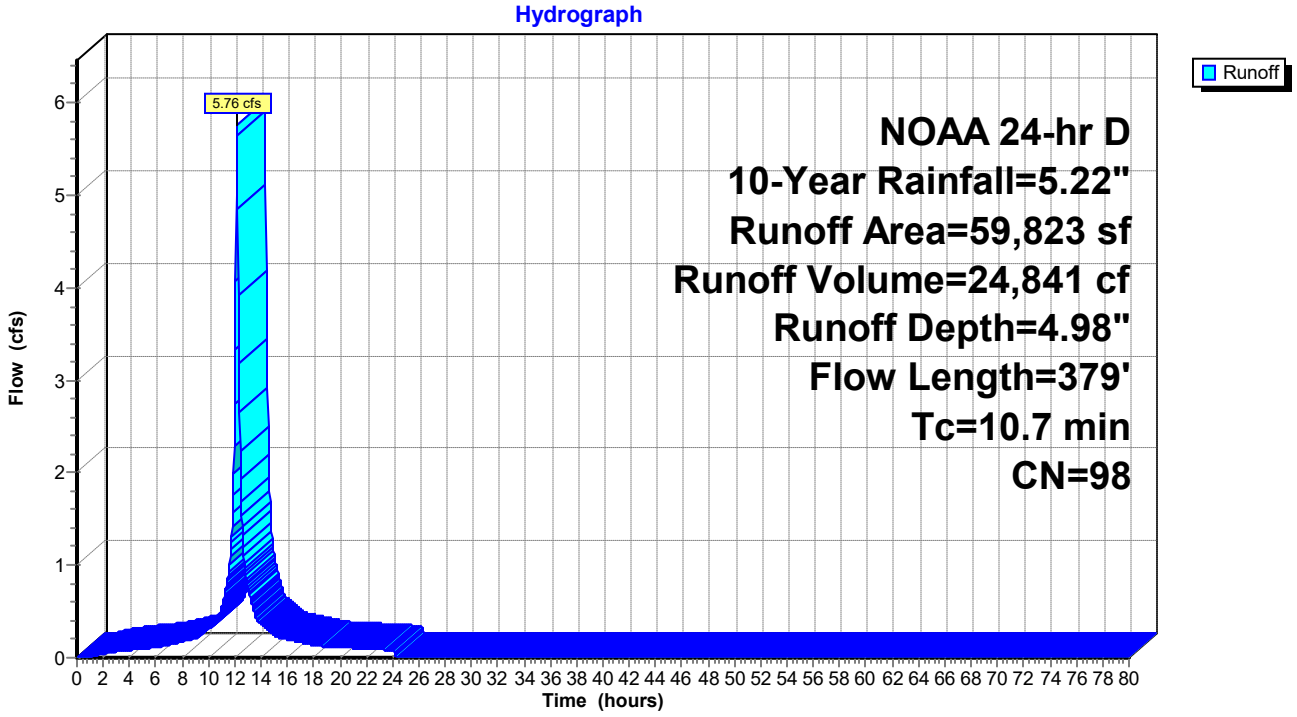
Runoff = 5.76 cfs @ 12.18 hrs, Volume= 24,841 cf, Depth= 4.98"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
19,602	98	Paved parking, HSG C
35,284	98	Roofs, HSG C
4,937	98	Paved parking, HSG D
59,823	98	Weighted Average
59,823		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 51S: Basin 10 - Imp



Hydrograph for Subcatchment 51S: Basin 10 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.03	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.05	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.07	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.08	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.10	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.11	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.12	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.15	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.18	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.20	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.27	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.36	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.66	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**2.74**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.93**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.44	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.32	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.23	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.20	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.17	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.15	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.13	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.12	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.11	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.11	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.10	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.09	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.09	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.08	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 52S: Basin 10 - Perv

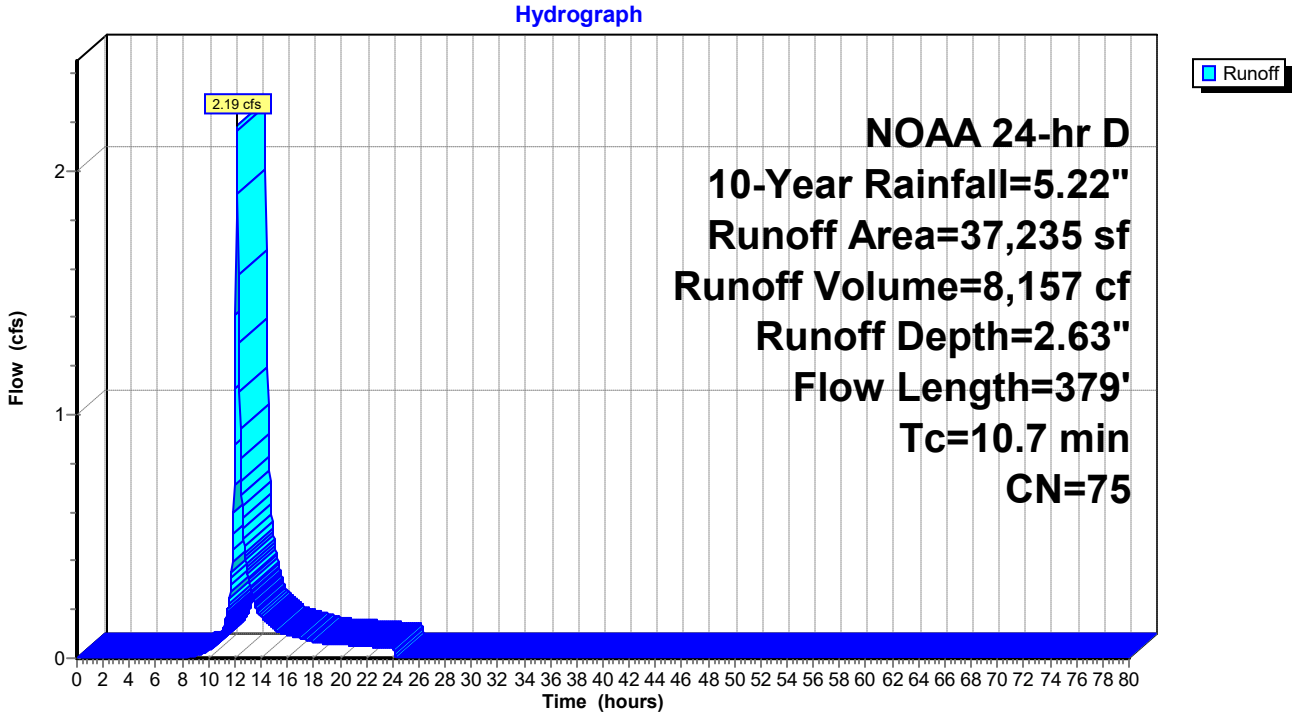
Runoff = 2.19 cfs @ 12.18 hrs, Volume= 8,157 cf, Depth= 2.63"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
7,626	80	>75% Grass cover, Good, HSG D
29,609	74	>75% Grass cover, Good, HSG C
37,235	75	Weighted Average
37,235		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 52S: Basin 10 - Perv



Hydrograph for Subcatchment 52S: Basin 10 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.63	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.63	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.63	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.63	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.63	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.63	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.63	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.63	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.63	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.63	0.00
8.00	0.68	0.00	0.00	48.80	5.22	2.63	0.00
8.80	0.80	0.00	0.01	49.60	5.22	2.63	0.00
9.60	0.94	0.02	0.02	50.40	5.22	2.63	0.00
10.40	1.14	0.06	0.05	51.20	5.22	2.63	0.00
11.20	1.46	0.15	0.13	52.00	5.22	2.63	0.00
12.00	2.50	0.65	**0.88**	52.80	5.22	2.63	0.00
12.80	3.76	1.49	**0.42**	53.60	5.22	2.63	0.00
13.60	4.08	1.73	0.21	54.40	5.22	2.63	0.00
14.40	4.28	1.88	0.15	55.20	5.22	2.63	0.00
15.20	4.42	1.99	0.11	56.00	5.22	2.63	0.00
16.00	4.54	2.08	0.10	56.80	5.22	2.63	0.00
16.80	4.65	2.17	0.08	57.60	5.22	2.63	0.00
17.60	4.74	2.24	0.07	58.40	5.22	2.63	0.00
18.40	4.81	2.30	0.06	59.20	5.22	2.63	0.00
19.20	4.88	2.35	0.06	60.00	5.22	2.63	0.00
20.00	4.95	2.41	0.06	60.80	5.22	2.63	0.00
20.80	5.01	2.46	0.05	61.60	5.22	2.63	0.00
21.60	5.07	2.50	0.05	62.40	5.22	2.63	0.00
22.40	5.12	2.55	0.05	63.20	5.22	2.63	0.00
23.20	5.17	2.59	0.04	64.00	5.22	2.63	0.00
24.00	**5.22**	**2.63**	0.04	64.80	5.22	2.63	0.00
24.80	5.22	2.63	0.00	65.60	5.22	2.63	0.00
25.60	5.22	2.63	0.00	66.40	5.22	2.63	0.00
26.40	5.22	2.63	0.00	67.20	5.22	2.63	0.00
27.20	5.22	2.63	0.00	68.00	5.22	2.63	0.00
28.00	5.22	2.63	0.00	68.80	5.22	2.63	0.00
28.80	5.22	2.63	0.00	69.60	5.22	2.63	0.00
29.60	5.22	2.63	0.00	70.40	5.22	2.63	0.00
30.40	5.22	2.63	0.00	71.20	5.22	2.63	0.00
31.20	5.22	2.63	0.00	72.00	5.22	2.63	0.00
32.00	5.22	2.63	0.00	72.80	5.22	2.63	0.00
32.80	5.22	2.63	0.00	73.60	5.22	2.63	0.00
33.60	5.22	2.63	0.00	74.40	5.22	2.63	0.00
34.40	5.22	2.63	0.00	75.20	5.22	2.63	0.00
35.20	5.22	2.63	0.00	76.00	5.22	2.63	0.00
36.00	5.22	2.63	0.00	76.80	5.22	2.63	0.00
36.80	5.22	2.63	0.00	77.60	5.22	2.63	0.00
37.60	5.22	2.63	0.00	78.40	5.22	2.63	0.00
38.40	5.22	2.63	0.00	79.20	5.22	2.63	0.00
39.20	5.22	2.63	0.00	80.00	5.22	2.63	0.00
40.00	5.22	2.63	0.00				

Summary for Subcatchment 53S: Basin 9 - Imp

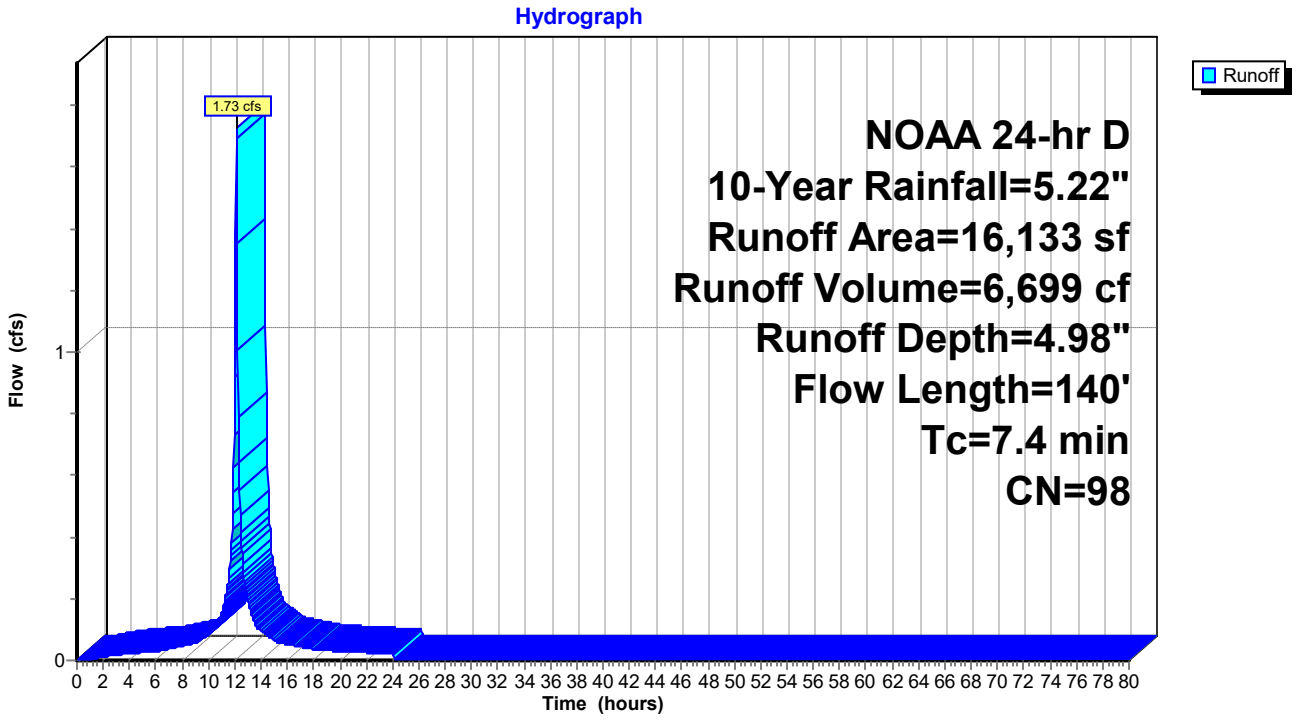
Runoff = 1.73 cfs @ 12.14 hrs, Volume= 6,699 cf, Depth= 4.98"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
6,889	98	Paved parking, HSG D
9,244	98	Paved parking, HSG C
16,133	98	Weighted Average
16,133		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 53S: Basin 9 - Imp



Hydrograph for Subcatchment 53S: Basin 9 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	4.98	0.00
0.80	0.05	0.00	0.00	41.60	5.22	4.98	0.00
1.60	0.10	0.01	0.01	42.40	5.22	4.98	0.00
2.40	0.15	0.04	0.01	43.20	5.22	4.98	0.00
3.20	0.21	0.08	0.02	44.00	5.22	4.98	0.00
4.00	0.27	0.12	0.02	44.80	5.22	4.98	0.00
4.80	0.34	0.18	0.03	45.60	5.22	4.98	0.00
5.60	0.41	0.24	0.03	46.40	5.22	4.98	0.00
6.40	0.48	0.30	0.03	47.20	5.22	4.98	0.00
7.20	0.57	0.39	0.04	48.00	5.22	4.98	0.00
8.00	0.68	0.48	0.05	48.80	5.22	4.98	0.00
8.80	0.80	0.59	0.06	49.60	5.22	4.98	0.00
9.60	0.94	0.74	0.07	50.40	5.22	4.98	0.00
10.40	1.14	0.93	0.10	51.20	5.22	4.98	0.00
11.20	1.46	1.24	0.19	52.00	5.22	4.98	0.00
12.00	2.50	2.27	**0.92**	52.80	5.22	4.98	0.00
12.80	3.76	3.53	**0.23**	53.60	5.22	4.98	0.00
13.60	4.08	3.84	0.11	54.40	5.22	4.98	0.00
14.40	4.28	4.04	0.08	55.20	5.22	4.98	0.00
15.20	4.42	4.19	0.06	56.00	5.22	4.98	0.00
16.00	4.54	4.31	0.05	56.80	5.22	4.98	0.00
16.80	4.65	4.41	0.05	57.60	5.22	4.98	0.00
17.60	4.74	4.50	0.04	58.40	5.22	4.98	0.00
18.40	4.81	4.57	0.03	59.20	5.22	4.98	0.00
19.20	4.88	4.64	0.03	60.00	5.22	4.98	0.00
20.00	4.95	4.71	0.03	60.80	5.22	4.98	0.00
20.80	5.01	4.77	0.03	61.60	5.22	4.98	0.00
21.60	5.07	4.83	0.03	62.40	5.22	4.98	0.00
22.40	5.12	4.88	0.02	63.20	5.22	4.98	0.00
23.20	5.17	4.94	0.02	64.00	5.22	4.98	0.00
24.00	**5.22**	**4.98**	0.02	64.80	5.22	4.98	0.00
24.80	5.22	4.98	0.00	65.60	5.22	4.98	0.00
25.60	5.22	4.98	0.00	66.40	5.22	4.98	0.00
26.40	5.22	4.98	0.00	67.20	5.22	4.98	0.00
27.20	5.22	4.98	0.00	68.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00	68.80	5.22	4.98	0.00
28.80	5.22	4.98	0.00	69.60	5.22	4.98	0.00
29.60	5.22	4.98	0.00	70.40	5.22	4.98	0.00
30.40	5.22	4.98	0.00	71.20	5.22	4.98	0.00
31.20	5.22	4.98	0.00	72.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00	72.80	5.22	4.98	0.00
32.80	5.22	4.98	0.00	73.60	5.22	4.98	0.00
33.60	5.22	4.98	0.00	74.40	5.22	4.98	0.00
34.40	5.22	4.98	0.00	75.20	5.22	4.98	0.00
35.20	5.22	4.98	0.00	76.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00	76.80	5.22	4.98	0.00
36.80	5.22	4.98	0.00	77.60	5.22	4.98	0.00
37.60	5.22	4.98	0.00	78.40	5.22	4.98	0.00
38.40	5.22	4.98	0.00	79.20	5.22	4.98	0.00
39.20	5.22	4.98	0.00	80.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00				

Summary for Subcatchment 54S: Basin 9 - Perv

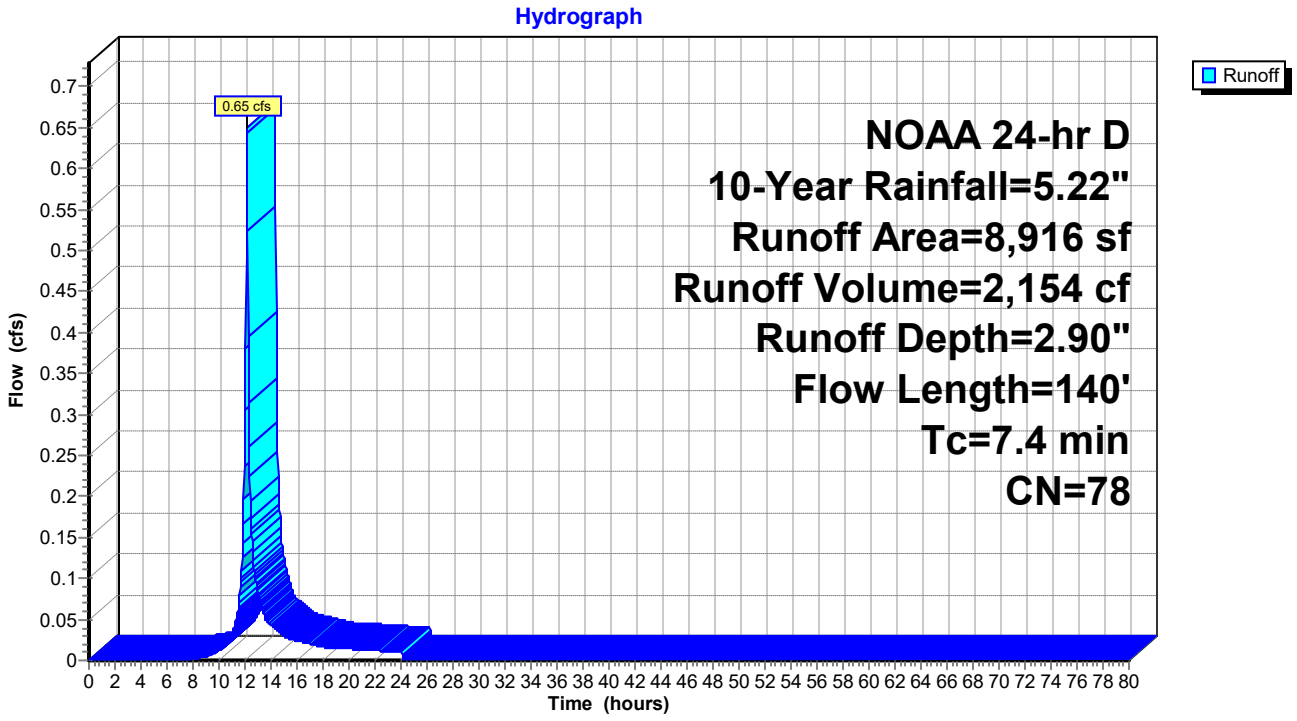
Runoff = 0.65 cfs @ 12.15 hrs, Volume= 2,154 cf, Depth= 2.90"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
2,537	74	>75% Grass cover, Good, HSG C
6,379	80	>75% Grass cover, Good, HSG D
8,916	78	Weighted Average
8,916		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 54S: Basin 9 - Perv



Hydrograph for Subcatchment 54S: Basin 9 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	5.22	2.90	0.00
0.80	0.05	0.00	0.00	41.60	5.22	2.90	0.00
1.60	0.10	0.00	0.00	42.40	5.22	2.90	0.00
2.40	0.15	0.00	0.00	43.20	5.22	2.90	0.00
3.20	0.21	0.00	0.00	44.00	5.22	2.90	0.00
4.00	0.27	0.00	0.00	44.80	5.22	2.90	0.00
4.80	0.34	0.00	0.00	45.60	5.22	2.90	0.00
5.60	0.41	0.00	0.00	46.40	5.22	2.90	0.00
6.40	0.48	0.00	0.00	47.20	5.22	2.90	0.00
7.20	0.57	0.00	0.00	48.00	5.22	2.90	0.00
8.00	0.68	0.00	0.00	48.80	5.22	2.90	0.00
8.80	0.80	0.02	0.00	49.60	5.22	2.90	0.00
9.60	0.94	0.04	0.01	50.40	5.22	2.90	0.00
10.40	1.14	0.10	0.02	51.20	5.22	2.90	0.00
11.20	1.46	0.22	0.04	52.00	5.22	2.90	0.00
12.00	2.50	0.79	**0.31**	52.80	5.22	2.90	0.00
12.80	3.76	1.70	**0.10**	53.60	5.22	2.90	0.00
13.60	4.08	1.95	0.05	54.40	5.22	2.90	0.00
14.40	4.28	2.11	0.04	55.20	5.22	2.90	0.00
15.20	4.42	2.23	0.03	56.00	5.22	2.90	0.00
16.00	4.54	2.33	0.02	56.80	5.22	2.90	0.00
16.80	4.65	2.41	0.02	57.60	5.22	2.90	0.00
17.60	4.74	2.49	0.02	58.40	5.22	2.90	0.00
18.40	4.81	2.55	0.02	59.20	5.22	2.90	0.00
19.20	4.88	2.61	0.01	60.00	5.22	2.90	0.00
20.00	4.95	2.67	0.01	60.80	5.22	2.90	0.00
20.80	5.01	2.72	0.01	61.60	5.22	2.90	0.00
21.60	5.07	2.77	0.01	62.40	5.22	2.90	0.00
22.40	5.12	2.82	0.01	63.20	5.22	2.90	0.00
23.20	5.17	2.86	0.01	64.00	5.22	2.90	0.00
24.00	**5.22**	**2.90**	0.01	64.80	5.22	2.90	0.00
24.80	5.22	2.90	0.00	65.60	5.22	2.90	0.00
25.60	5.22	2.90	0.00	66.40	5.22	2.90	0.00
26.40	5.22	2.90	0.00	67.20	5.22	2.90	0.00
27.20	5.22	2.90	0.00	68.00	5.22	2.90	0.00
28.00	5.22	2.90	0.00	68.80	5.22	2.90	0.00
28.80	5.22	2.90	0.00	69.60	5.22	2.90	0.00
29.60	5.22	2.90	0.00	70.40	5.22	2.90	0.00
30.40	5.22	2.90	0.00	71.20	5.22	2.90	0.00
31.20	5.22	2.90	0.00	72.00	5.22	2.90	0.00
32.00	5.22	2.90	0.00	72.80	5.22	2.90	0.00
32.80	5.22	2.90	0.00	73.60	5.22	2.90	0.00
33.60	5.22	2.90	0.00	74.40	5.22	2.90	0.00
34.40	5.22	2.90	0.00	75.20	5.22	2.90	0.00
35.20	5.22	2.90	0.00	76.00	5.22	2.90	0.00
36.00	5.22	2.90	0.00	76.80	5.22	2.90	0.00
36.80	5.22	2.90	0.00	77.60	5.22	2.90	0.00
37.60	5.22	2.90	0.00	78.40	5.22	2.90	0.00
38.40	5.22	2.90	0.00	79.20	5.22	2.90	0.00
39.20	5.22	2.90	0.00	80.00	5.22	2.90	0.00
40.00	5.22	2.90	0.00				

Summary for Pond 21P: Basin 3

Inflow Area = 51,670 sf, 62.76% Impervious, Inflow Depth = 4.07" for 10-Year event
Inflow = 4.59 cfs @ 12.15 hrs, Volume= 17,540 cf
Outflow = 3.95 cfs @ 12.20 hrs, Volume= 17,540 cf, Atten= 14%, Lag= 3.1 min
Discarded = 1.21 cfs @ 11.88 hrs, Volume= 15,267 cf
Primary = 2.74 cfs @ 12.20 hrs, Volume= 2,272 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 559.58' @ 12.20 hrs Surf.Area= 5,227 sf Storage= 1,206 cf

Plug-Flow detention time= 2.4 min calculated for 17,531 cf (100% of inflow)
Center-of-Mass det. time= 2.4 min (775.6 - 773.3)

Volume	Invert	Avail.Storage	Storage Description
#1	559.00'	4,537 cf	**Custom Stage Data (Prismatic)** Listed below 11,343 cf Overall x 40.0% Voids

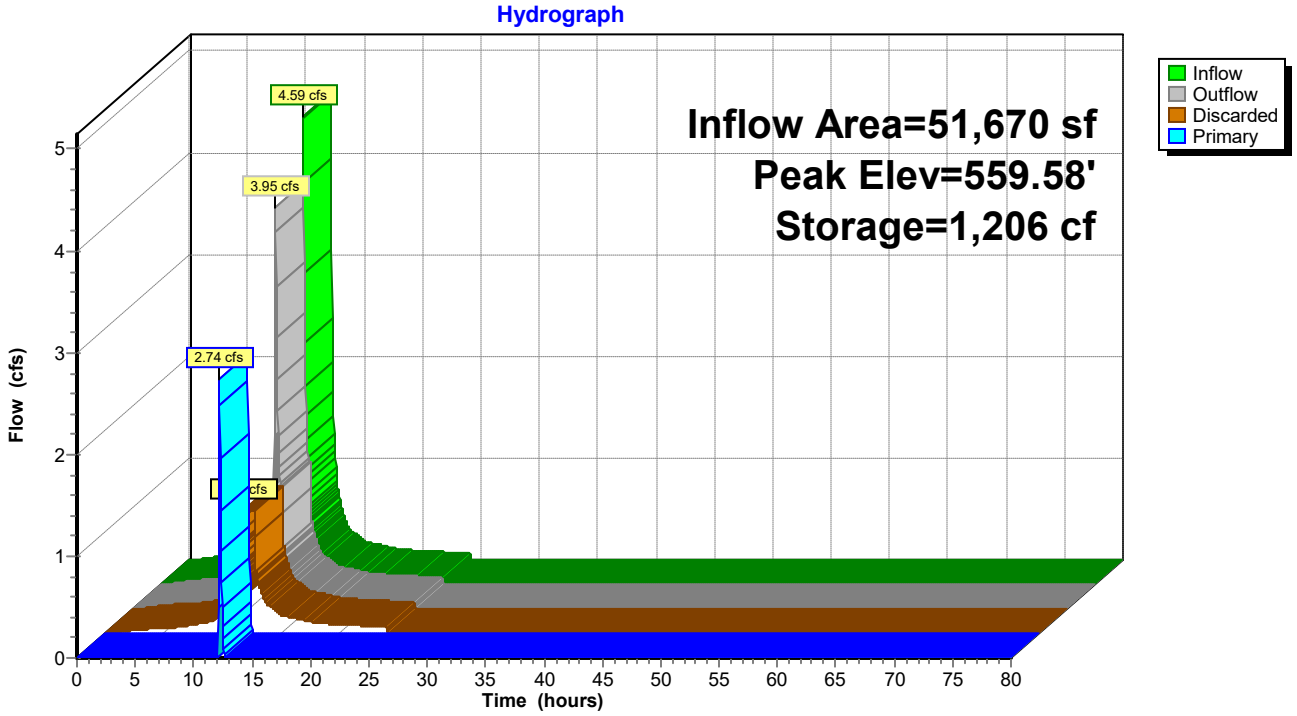
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
559.00	5,227	0	0
560.00	5,227	5,227	5,227
561.00	5,227	5,227	10,454
561.17	5,227	889	11,343

Device	Routing	Invert	Outlet Devices
#1	Primary	559.22'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	559.00'	**10.000 in/hr Exfiltration over Surface area**

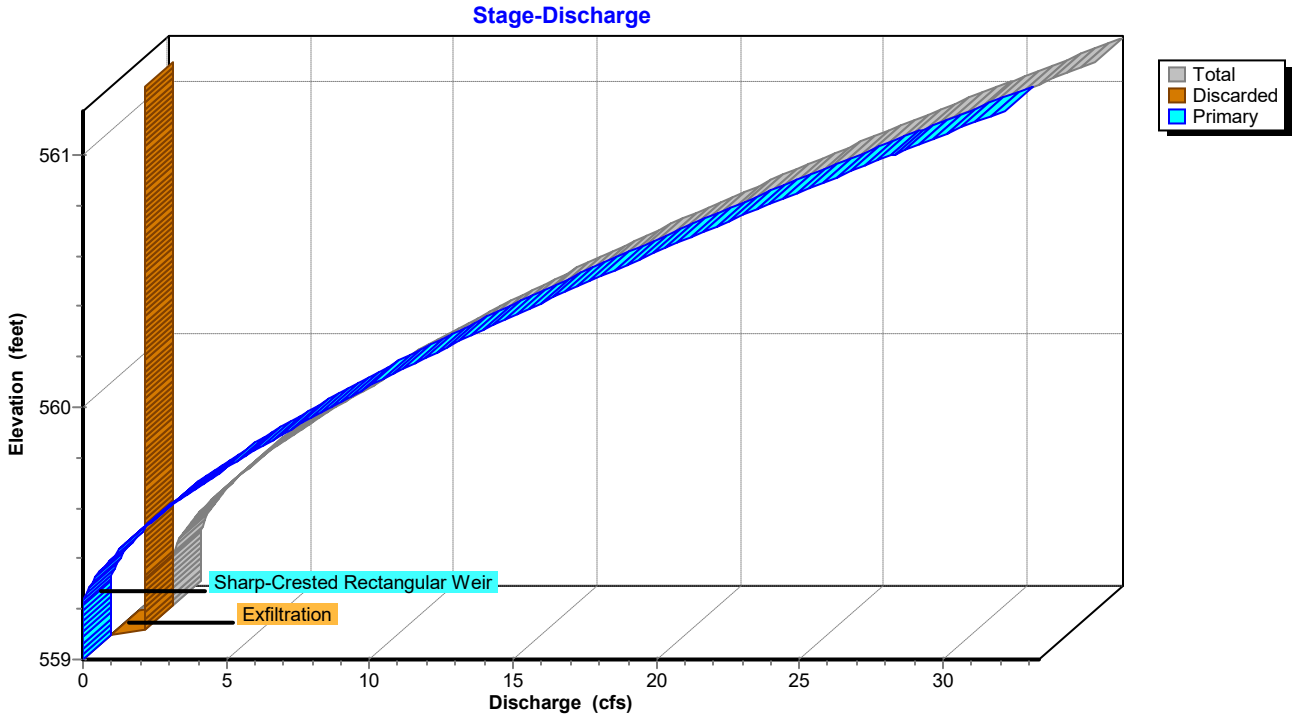
Discarded OutFlow Max=1.21 cfs @ 11.88 hrs HW=559.03' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.21 cfs)

Primary OutFlow Max=2.70 cfs @ 12.20 hrs HW=559.57' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 2.70 cfs @ 1.95 fps)

Pond 21P: Basin 3



Pond 21P: Basin 3



Hydrograph for Pond 21P: Basin 3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	559.00	0.00	0.00	0.00
2.00	0.02	1	559.00	0.02	0.02	0.00
4.00	0.05	2	559.00	0.05	0.05	0.00
6.00	0.06	2	559.00	0.06	0.06	0.00
8.00	0.10	4	559.00	0.10	0.10	0.00
10.00	0.19	7	559.00	0.19	**0.19**	0.00
12.00	**2.25**	**270**	**559.13**	**1.21**	**1.21**	**0.00**
14.00	**0.28**	**11**	**559.01**	**0.28**	0.28	**0.00**
16.00	0.16	6	559.00	0.16	0.16	0.00
18.00	0.11	4	559.00	0.11	0.11	0.00
20.00	0.09	3	559.00	0.09	0.09	0.00
22.00	0.08	3	559.00	0.08	0.08	0.00
24.00	0.06	2	559.00	0.06	0.06	0.00
26.00	0.00	0	559.00	0.00	0.00	0.00
28.00	0.00	0	559.00	0.00	0.00	0.00
30.00	0.00	0	559.00	0.00	0.00	0.00
32.00	0.00	0	559.00	0.00	0.00	0.00
34.00	0.00	0	559.00	0.00	0.00	0.00
36.00	0.00	0	559.00	0.00	0.00	0.00
38.00	0.00	0	559.00	0.00	0.00	0.00
40.00	0.00	0	559.00	0.00	0.00	0.00
42.00	0.00	0	559.00	0.00	0.00	0.00
44.00	0.00	0	559.00	0.00	0.00	0.00
46.00	0.00	0	559.00	0.00	0.00	0.00
48.00	0.00	0	559.00	0.00	0.00	0.00
50.00	0.00	0	559.00	0.00	0.00	0.00
52.00	0.00	0	559.00	0.00	0.00	0.00
54.00	0.00	0	559.00	0.00	0.00	0.00
56.00	0.00	0	559.00	0.00	0.00	0.00
58.00	0.00	0	559.00	0.00	0.00	0.00
60.00	0.00	0	559.00	0.00	0.00	0.00
62.00	0.00	0	559.00	0.00	0.00	0.00
64.00	0.00	0	559.00	0.00	0.00	0.00
66.00	0.00	0	559.00	0.00	0.00	0.00
68.00	0.00	0	559.00	0.00	0.00	0.00
70.00	0.00	0	559.00	0.00	0.00	0.00
72.00	0.00	0	559.00	0.00	0.00	0.00
74.00	0.00	0	559.00	0.00	0.00	0.00
76.00	0.00	0	559.00	0.00	0.00	0.00
78.00	0.00	0	559.00	0.00	0.00	0.00
80.00	0.00	0	559.00	0.00	0.00	0.00

Stage-Discharge for Pond 21P: Basin 3

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
559.00	0.00	**0.00**	0.00
559.05	1.21	**1.21**	0.00
559.10	1.21	1.21	0.00
559.15	1.21	1.21	0.00
559.20	1.21	1.21	0.00
559.25	1.28	1.21	0.07
559.30	1.50	1.21	0.29
559.35	1.82	1.21	0.61
559.40	2.20	1.21	0.99
559.45	2.64	1.21	1.43
559.50	3.12	1.21	1.91
559.55	3.65	1.21	2.44
559.60	4.22	1.21	3.01
559.65	4.82	1.21	3.61
559.70	5.46	1.21	4.25
559.75	6.12	1.21	4.91
559.80	6.82	1.21	5.61
559.85	7.54	1.21	6.33
559.90	8.30	1.21	7.09
559.95	9.07	1.21	7.86
560.00	9.87	1.21	8.66
560.05	10.69	1.21	9.48
560.10	11.53	1.21	10.32
560.15	12.40	1.21	11.19
560.20	13.28	1.21	12.07
560.25	14.18	1.21	12.97
560.30	15.10	1.21	13.89
560.35	16.03	1.21	14.82
560.40	16.99	1.21	15.78
560.45	17.96	1.21	16.75
560.50	18.94	1.21	17.73
560.55	19.94	1.21	18.73
560.60	20.95	1.21	19.74
560.65	21.98	1.21	20.77
560.70	23.02	1.21	21.81
560.75	24.07	1.21	22.86
560.80	25.14	1.21	23.93
560.85	26.21	1.21	25.00
560.90	27.30	1.21	26.09
560.95	28.40	1.21	27.19
561.00	29.51	1.21	28.30
561.05	30.63	1.21	29.42
561.10	31.76	1.21	30.55
561.15	**32.90**	1.21	**31.69**

Stage-Area-Storage for Pond 21P: Basin 3

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
559.00	**5,227**	0
559.05	5,227	105
559.10	5,227	209
559.15	5,227	314
559.20	5,227	418
559.25	5,227	523
559.30	5,227	627
559.35	5,227	732
559.40	5,227	836
559.45	5,227	941
559.50	5,227	1,045
559.55	5,227	1,150
559.60	5,227	1,254
559.65	5,227	1,359
559.70	5,227	1,464
559.75	5,227	1,568
559.80	5,227	1,673
559.85	5,227	1,777
559.90	5,227	1,882
559.95	5,227	1,986
560.00	5,227	2,091
560.05	5,227	2,195
560.10	5,227	2,300
560.15	5,227	2,404
560.20	5,227	2,509
560.25	5,227	2,614
560.30	5,227	2,718
560.35	5,227	2,823
560.40	5,227	2,927
560.45	5,227	3,032
560.50	5,227	3,136
560.55	5,227	3,241
560.60	5,227	3,345
560.65	5,227	3,450
560.70	5,227	3,554
560.75	5,227	3,659
560.80	5,227	3,763
560.85	5,227	3,868
560.90	5,227	3,973
560.95	5,227	4,077
561.00	5,227	4,182
561.05	5,227	4,286
561.10	5,227	4,391
561.15	5,227	**4,495**

Summary for Pond 22P: Basin 4

Inflow Area = 57,587 sf, 86.93% Impervious, Inflow Depth = 4.66" for 10-Year event
Inflow = 6.28 cfs @ 12.12 hrs, Volume= 22,381 cf
Outflow = 1.47 cfs @ 12.39 hrs, Volume= 22,381 cf, Atten= 77%, Lag= 16.5 min
Discarded = 1.13 cfs @ 11.72 hrs, Volume= 21,553 cf
Primary = 0.35 cfs @ 12.39 hrs, Volume= 828 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 572.89' @ 12.39 hrs Surf.Area= 12,197 sf Storage= 4,328 cf

Plug-Flow detention time= 17.4 min calculated for 22,381 cf (100% of inflow)
Center-of-Mass det. time= 17.4 min (772.4 - 755.0)

Volume	Invert	Avail.Storage	Storage Description
#1	572.00'	14,197 cf	**Custom Stage Data (Prismatic)** Listed below 35,493 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
572.00	12,197	0	0
573.00	12,197	12,197	12,197
574.00	12,197	12,197	24,394
574.91	12,197	11,099	35,493

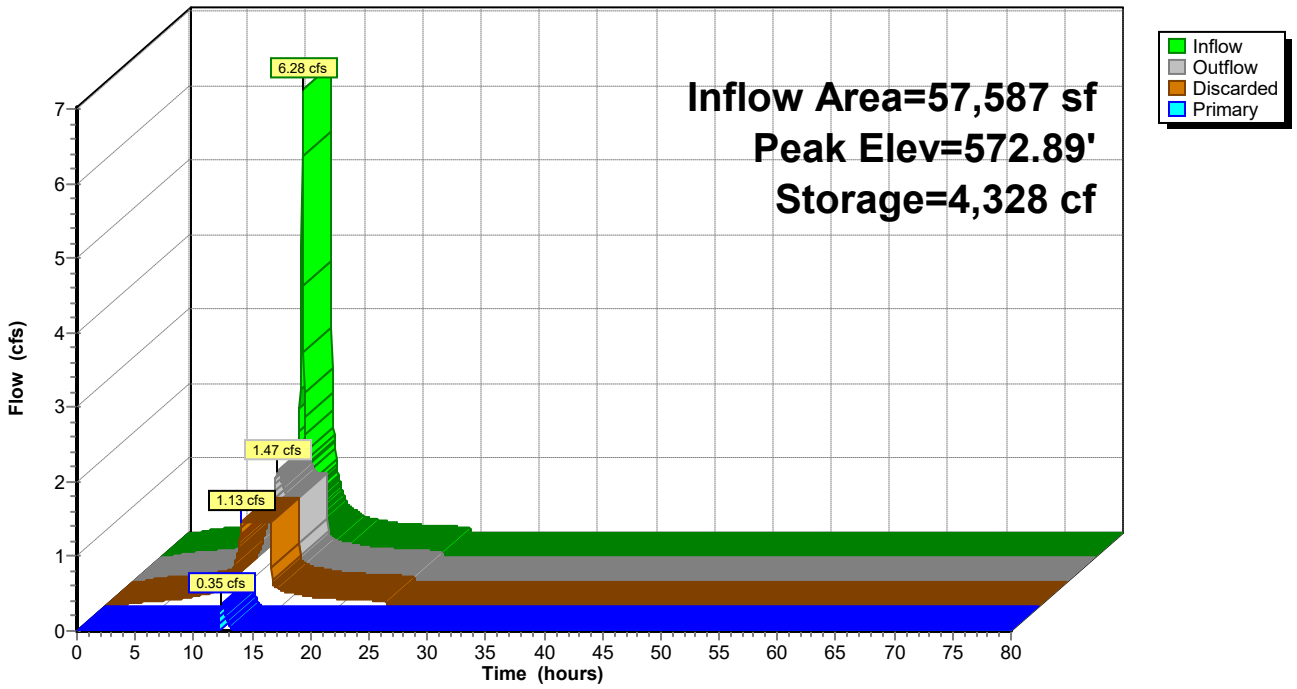
Device	Routing	Invert	Outlet Devices
#1	Primary	574.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	572.50'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	572.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=1.13 cfs @ 11.72 hrs HW=572.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.13 cfs)

Primary OutFlow Max=0.35 cfs @ 12.39 hrs HW=572.89' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Orifice Controls 0.35 cfs @ 2.12 fps)

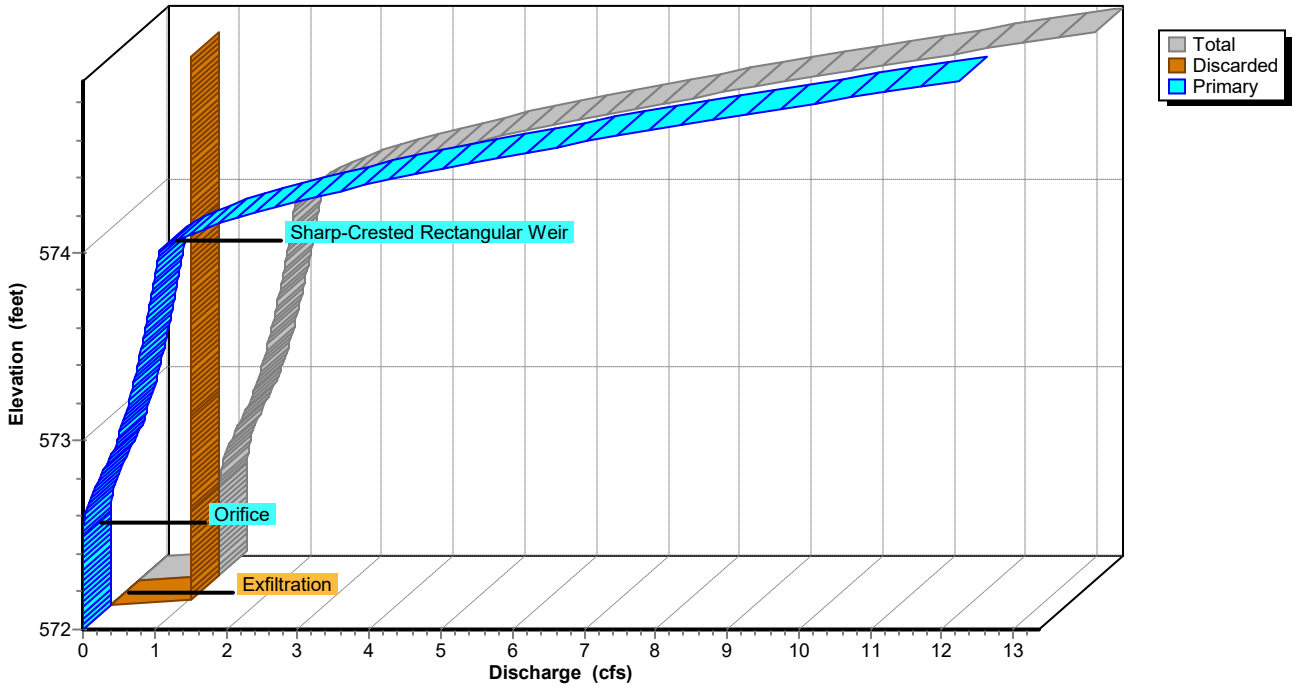
Pond 22P: Basin 4

Hydrograph



Pond 22P: Basin 4

Stage-Discharge



Hydrograph for Pond 22P: Basin 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	572.00	0.00	0.00	0.00
2.00	0.04	5	572.00	0.04	0.04	0.00
4.00	0.07	9	572.00	0.07	0.07	0.00
6.00	0.09	12	572.00	0.09	0.09	0.00
8.00	0.15	19	572.00	0.15	0.15	0.00
10.00	0.28	34	572.01	0.27	**0.27**	0.00
12.00	**3.54**	**1,029**	**572.21**	**1.13**	**1.13**	**0.00**
14.00	**0.33**	**845**	**572.17**	**1.13**	1.13	**0.00**
16.00	0.18	23	572.00	0.18	0.18	0.00
18.00	0.12	16	572.00	0.12	0.12	0.00
20.00	0.10	13	572.00	0.10	0.10	0.00
22.00	0.09	11	572.00	0.09	0.09	0.00
24.00	0.07	9	572.00	0.07	0.07	0.00
26.00	0.00	0	572.00	0.00	0.00	0.00
28.00	0.00	0	572.00	0.00	0.00	0.00
30.00	0.00	0	572.00	0.00	0.00	0.00
32.00	0.00	0	572.00	0.00	0.00	0.00
34.00	0.00	0	572.00	0.00	0.00	0.00
36.00	0.00	0	572.00	0.00	0.00	0.00
38.00	0.00	0	572.00	0.00	0.00	0.00
40.00	0.00	0	572.00	0.00	0.00	0.00
42.00	0.00	0	572.00	0.00	0.00	0.00
44.00	0.00	0	572.00	0.00	0.00	0.00
46.00	0.00	0	572.00	0.00	0.00	0.00
48.00	0.00	0	572.00	0.00	0.00	0.00
50.00	0.00	0	572.00	0.00	0.00	0.00
52.00	0.00	0	572.00	0.00	0.00	0.00
54.00	0.00	0	572.00	0.00	0.00	0.00
56.00	0.00	0	572.00	0.00	0.00	0.00
58.00	0.00	0	572.00	0.00	0.00	0.00
60.00	0.00	0	572.00	0.00	0.00	0.00
62.00	0.00	0	572.00	0.00	0.00	0.00
64.00	0.00	0	572.00	0.00	0.00	0.00
66.00	0.00	0	572.00	0.00	0.00	0.00
68.00	0.00	0	572.00	0.00	0.00	0.00
70.00	0.00	0	572.00	0.00	0.00	0.00
72.00	0.00	0	572.00	0.00	0.00	0.00
74.00	0.00	0	572.00	0.00	0.00	0.00
76.00	0.00	0	572.00	0.00	0.00	0.00
78.00	0.00	0	572.00	0.00	0.00	0.00
80.00	0.00	0	572.00	0.00	0.00	0.00

Stage-Discharge for Pond 22P: Basin 4

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
572.00	0.00	**0.00**	0.00
572.05	1.13	**1.13**	0.00
572.10	1.13	1.13	0.00
572.15	1.13	1.13	0.00
572.20	1.13	1.13	0.00
572.25	1.13	1.13	0.00
572.30	1.13	1.13	0.00
572.35	1.13	1.13	0.00
572.40	1.13	1.13	0.00
572.45	1.13	1.13	0.00
572.50	1.13	1.13	0.00
572.55	1.14	1.13	0.01
572.60	1.16	1.13	0.03
572.65	1.19	1.13	0.07
572.70	1.24	1.13	0.11
572.75	1.30	1.13	0.17
572.80	1.36	1.13	0.23
572.85	1.43	1.13	0.30
572.90	1.49	1.13	0.36
572.95	1.55	1.13	0.43
573.00	1.60	1.13	0.47
573.05	1.65	1.13	0.52
573.10	1.69	1.13	0.56
573.15	1.73	1.13	0.60
573.20	1.76	1.13	0.63
573.25	1.80	1.13	0.67
573.30	1.83	1.13	0.70
573.35	1.86	1.13	0.73
573.40	1.89	1.13	0.76
573.45	1.92	1.13	0.79
573.50	1.95	1.13	0.82
573.55	1.97	1.13	0.85
573.60	2.00	1.13	0.87
573.65	2.03	1.13	0.90
573.70	2.05	1.13	0.92
573.75	2.07	1.13	0.95
573.80	2.10	1.13	0.97
573.85	2.12	1.13	0.99
573.90	2.14	1.13	1.01
573.95	2.17	1.13	1.04
574.00	2.19	1.13	1.06
574.05	2.35	1.13	1.22
574.10	2.64	1.13	1.51
574.15	3.00	1.13	1.87
574.20	3.43	1.13	2.30
574.25	3.90	1.13	2.77
574.30	4.42	1.13	3.29
574.35	4.99	1.13	3.86
574.40	5.59	1.13	4.46
574.45	6.22	1.13	5.09
574.50	6.89	1.13	5.76
574.55	7.59	1.13	6.46
574.60	8.31	1.13	7.18
574.65	9.06	1.13	7.93
574.70	9.84	1.13	8.71
574.75	10.64	1.13	9.51
574.80	11.47	1.13	10.34
574.85	12.31	1.13	11.18
574.90	**13.18**	1.13	**12.05**

Stage-Area-Storage for Pond 22P: Basin 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
572.00	**12,197**	0
572.05	12,197	244
572.10	12,197	488
572.15	12,197	732
572.20	12,197	976
572.25	12,197	1,220
572.30	12,197	1,464
572.35	12,197	1,708
572.40	12,197	1,952
572.45	12,197	2,195
572.50	12,197	2,439
572.55	12,197	2,683
572.60	12,197	2,927
572.65	12,197	3,171
572.70	12,197	3,415
572.75	12,197	3,659
572.80	12,197	3,903
572.85	12,197	4,147
572.90	12,197	4,391
572.95	12,197	4,635
573.00	12,197	4,879
573.05	12,197	5,123
573.10	12,197	5,367
573.15	12,197	5,611
573.20	12,197	5,855
573.25	12,197	6,099
573.30	12,197	6,342
573.35	12,197	6,586
573.40	12,197	6,830
573.45	12,197	7,074
573.50	12,197	7,318
573.55	12,197	7,562
573.60	12,197	7,806
573.65	12,197	8,050
573.70	12,197	8,294
573.75	12,197	8,538
573.80	12,197	8,782
573.85	12,197	9,026
573.90	12,197	9,270
573.95	12,197	9,514
574.00	12,197	9,758
574.05	12,197	10,002
574.10	12,197	10,245
574.15	12,197	10,489
574.20	12,197	10,733
574.25	12,197	10,977
574.30	12,197	11,221
574.35	12,197	11,465
574.40	12,197	11,709
574.45	12,197	11,953
574.50	12,197	12,197
574.55	12,197	12,441
574.60	12,197	12,685
574.65	12,197	12,929
574.70	12,197	13,173
574.75	12,197	13,417
574.80	12,197	13,661
574.85	12,197	13,905
574.90	12,197	**14,149**

Summary for Pond 27P: Basin 2

Inflow Area = 217,925 sf, 51.70% Impervious, Inflow Depth = 1.90" for 10-Year event
Inflow = 10.85 cfs @ 12.19 hrs, Volume= 34,595 cf
Outflow = 1.51 cfs @ 12.85 hrs, Volume= 16,342 cf, Atten= 86%, Lag= 39.6 min
Primary = 1.51 cfs @ 12.85 hrs, Volume= 16,342 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 544.77' @ 12.85 hrs Surf.Area= 27,872 sf Storage= 20,640 cf

Plug-Flow detention time= 300.1 min calculated for 16,333 cf (47% of inflow)
Center-of-Mass det. time= 173.5 min (972.3 - 798.8)

Volume	Invert	Avail.Storage	Storage Description
#1	544.00'	56,873 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

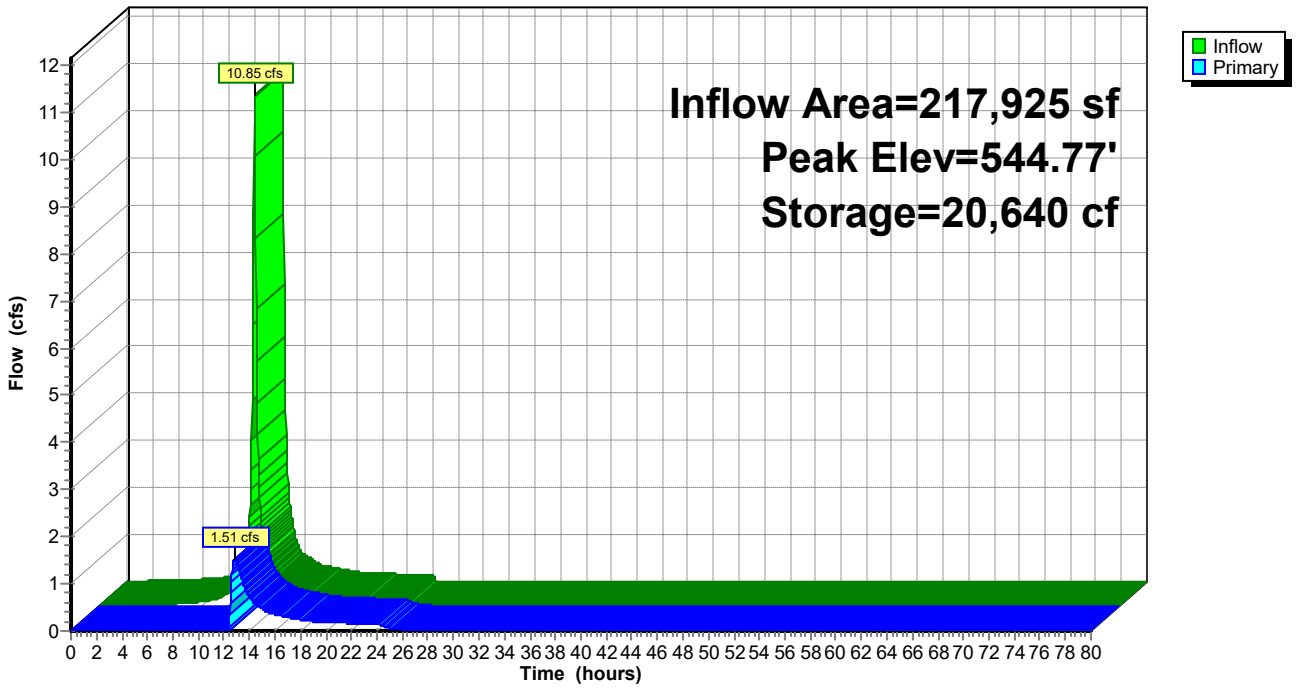
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
544.00	26,023	0	0
546.00	30,850	56,873	56,873

Device	Routing	Invert	Outlet Devices
#1	Primary	545.10'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	544.68'	**18.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.7' Crest Height

Primary OutFlow Max=1.50 cfs @ 12.85 hrs HW=544.77' (Free Discharge)
1=Grate (Controls 0.00 cfs)
2=Sharp-Crested Rectangular Weir (Weir Controls 1.50 cfs @ 0.97 fps)

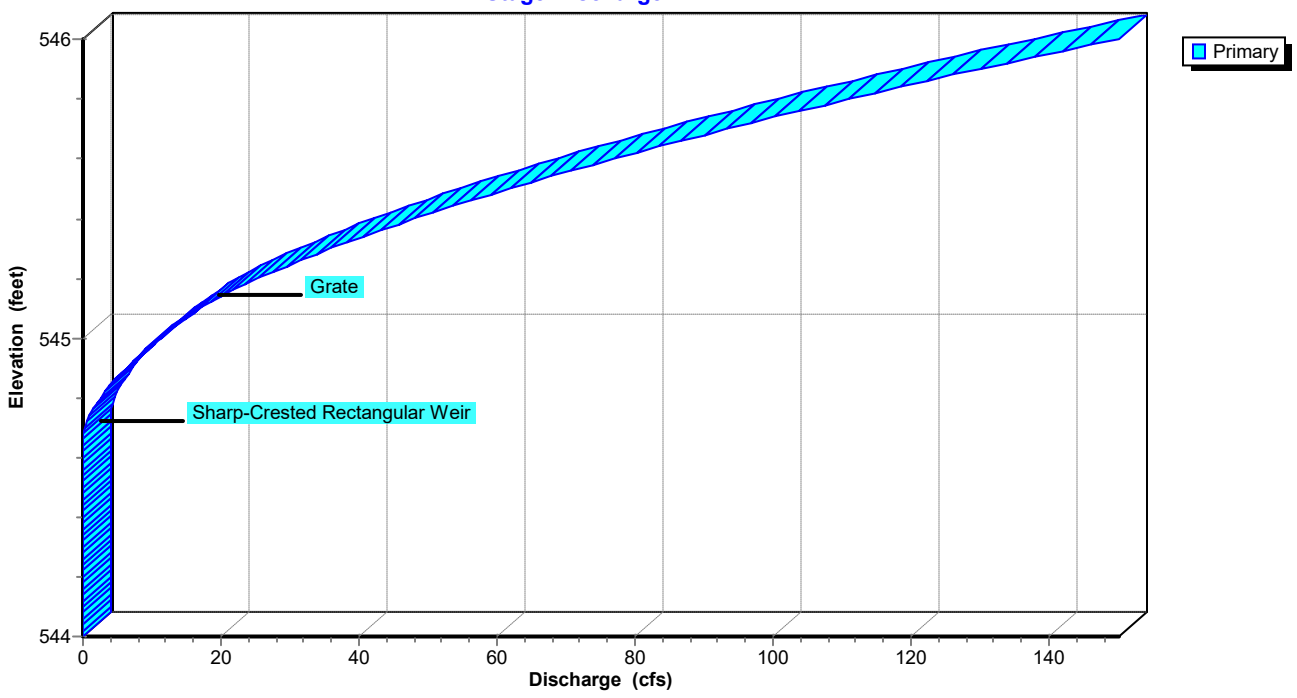
Pond 27P: Basin 2

Hydrograph



Pond 27P: Basin 2

Stage-Discharge



Hydrograph for Pond 27P: Basin 2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	544.00	0.00
2.00	0.02	49	544.00	0.00
4.00	0.04	287	544.01	0.00
6.00	0.06	644	544.02	0.00
8.00	0.10	1,179	544.05	0.00
10.00	0.26	2,355	544.09	0.00
12.00	**3.53**	**8,111**	**544.31**	**0.00**
14.00	**0.56**	**19,698**	**544.73**	**0.72**
16.00	0.31	19,139	544.71	0.35
18.00	0.21	18,939	544.70	0.24
20.00	0.18	18,845	544.70	0.19
22.00	0.16	18,797	544.70	0.16
24.00	0.13	18,723	544.70	0.14
26.00	0.00	18,317	544.68	0.02
28.00	0.00	18,261	544.68	0.00
30.00	0.00	18,254	544.68	0.00
32.00	0.00	18,254	544.68	0.00
34.00	0.00	18,254	544.68	0.00
36.00	0.00	18,254	544.68	0.00
38.00	0.00	18,254	544.68	0.00
40.00	0.00	18,254	544.68	0.00
42.00	0.00	18,254	544.68	0.00
44.00	0.00	18,254	544.68	0.00
46.00	0.00	18,254	544.68	0.00
48.00	0.00	18,254	544.68	0.00
50.00	0.00	18,254	544.68	0.00
52.00	0.00	18,254	544.68	0.00
54.00	0.00	18,254	544.68	0.00
56.00	0.00	18,254	544.68	0.00
58.00	0.00	18,254	544.68	0.00
60.00	0.00	18,254	544.68	0.00
62.00	0.00	18,254	544.68	0.00
64.00	0.00	18,254	544.68	0.00
66.00	0.00	18,254	544.68	0.00
68.00	0.00	18,254	544.68	0.00
70.00	0.00	18,254	544.68	0.00
72.00	0.00	18,254	544.68	0.00
74.00	0.00	18,254	544.68	0.00
76.00	0.00	18,254	544.68	0.00
78.00	0.00	18,254	544.68	0.00
80.00	0.00	18,254	544.68	0.00

Stage-Discharge for Pond 27P: Basin 2

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
544.00	0.00	544.51	0.00	545.02	12.32	545.53	66.31
544.01	0.00	544.52	0.00	545.03	12.88	545.54	67.80
544.02	0.00	544.53	0.00	545.04	13.46	545.55	69.30
544.03	0.00	544.54	0.00	545.05	14.05	545.56	70.82
544.04	0.00	544.55	0.00	545.06	14.64	545.57	72.35
544.05	0.00	544.56	0.00	545.07	15.25	545.58	73.89
544.06	0.00	544.57	0.00	545.08	15.86	545.59	75.45
544.07	0.00	544.58	0.00	545.09	16.48	545.60	77.02
544.08	0.00	544.59	0.00	545.10	17.12	545.61	78.60
544.09	0.00	544.60	0.00	545.11	17.81	545.62	80.19
544.10	0.00	544.61	0.00	545.12	18.55	545.63	81.80
544.11	0.00	544.62	0.00	545.13	19.32	545.64	83.43
544.12	0.00	544.63	0.00	545.14	20.13	545.65	85.06
544.13	0.00	544.64	0.00	545.15	20.96	545.66	86.71
544.14	0.00	544.65	0.00	545.16	21.82	545.67	88.37
544.15	0.00	544.66	0.00	545.17	22.71	545.68	90.04
544.16	0.00	544.67	0.00	545.18	23.61	545.69	91.73
544.17	0.00	544.68	0.00	545.19	24.54	545.70	93.43
544.18	0.00	544.69	0.06	545.20	25.49	545.71	95.14
544.19	0.00	544.70	0.17	545.21	26.46	545.72	96.87
544.20	0.00	544.71	0.31	545.22	27.45	545.73	98.60
544.21	0.00	544.72	0.47	545.23	28.45	545.74	100.35
544.22	0.00	544.73	0.66	545.24	29.48	545.75	102.11
544.23	0.00	544.74	0.87	545.25	30.53	545.76	103.89
544.24	0.00	544.75	1.10	545.26	31.59	545.77	105.68
544.25	0.00	544.76	1.35	545.27	32.67	545.78	107.47
544.26	0.00	544.77	1.61	545.28	33.77	545.79	109.29
544.27	0.00	544.78	1.89	545.29	34.88	545.80	111.11
544.28	0.00	544.79	2.19	545.30	36.02	545.81	112.95
544.29	0.00	544.80	2.49	545.31	37.16	545.82	114.79
544.30	0.00	544.81	2.82	545.32	38.33	545.83	116.65
544.31	0.00	544.82	3.15	545.33	39.51	545.84	118.53
544.32	0.00	544.83	3.50	545.34	40.71	545.85	120.41
544.33	0.00	544.84	3.87	545.35	41.92	545.86	122.31
544.34	0.00	544.85	4.24	545.36	43.15	545.87	124.22
544.35	0.00	544.86	4.63	545.37	44.40	545.88	126.14
544.36	0.00	544.87	5.03	545.38	45.66	545.89	128.07
544.37	0.00	544.88	5.44	545.39	46.93	545.90	130.02
544.38	0.00	544.89	5.86	545.40	48.22	545.91	131.98
544.39	0.00	544.90	6.29	545.41	49.53	545.92	133.94
544.40	0.00	544.91	6.74	545.42	50.84	545.93	135.93
544.41	0.00	544.92	7.19	545.43	52.18	545.94	137.92
544.42	0.00	544.93	7.66	545.44	53.53	545.95	139.92
544.43	0.00	544.94	8.13	545.45	54.89	545.96	141.94
544.44	0.00	544.95	8.62	545.46	56.27	545.97	143.97
544.45	0.00	544.96	9.12	545.47	57.66	545.98	146.01
544.46	0.00	544.97	9.63	545.48	59.07	545.99	148.06
544.47	0.00	544.98	10.14	545.49	60.49	546.00	**150.12**
544.48	0.00	544.99	10.67	545.50	61.92		
544.49	0.00	545.00	11.21	545.51	63.37		
544.50	0.00	545.01	11.76	545.52	64.83		

Stage-Area-Storage for Pond 27P: Basin 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
544.00	26,023	0	545.02	28,485	27,799
544.02	26,071	521	545.04	28,533	28,369
544.04	26,120	1,043	545.06	28,581	28,940
544.06	26,168	1,566	545.08	28,630	29,512
544.08	26,216	2,090	545.10	28,678	30,085
544.10	26,264	2,614	545.12	28,726	30,660
544.12	26,313	3,140	545.14	28,774	31,235
544.14	26,361	3,667	545.16	28,823	31,810
544.16	26,409	4,195	545.18	28,871	32,387
544.18	26,457	4,723	545.20	28,919	32,965
544.20	26,506	5,253	545.22	28,967	33,544
544.22	26,554	5,783	545.24	29,016	34,124
544.24	26,602	6,315	545.26	29,064	34,705
544.26	26,651	6,848	545.28	29,112	35,287
544.28	26,699	7,381	545.30	29,161	35,869
544.30	26,747	7,916	545.32	29,209	36,453
544.32	26,795	8,451	545.34	29,257	37,038
544.34	26,844	8,987	545.36	29,305	37,623
544.36	26,892	9,525	545.38	29,354	38,210
544.38	26,940	10,063	545.40	29,402	38,797
544.40	26,988	10,602	545.42	29,450	39,386
544.42	27,037	11,143	545.44	29,498	39,975
544.44	27,085	11,684	545.46	29,547	40,566
544.46	27,133	12,226	545.48	29,595	41,157
544.48	27,181	12,769	545.50	29,643	41,750
544.50	27,230	13,313	545.52	29,692	42,343
544.52	27,278	13,858	545.54	29,740	42,937
544.54	27,326	14,404	545.56	29,788	43,533
544.56	27,375	14,951	545.58	29,836	44,129
544.58	27,423	15,499	545.60	29,885	44,726
544.60	27,471	16,048	545.62	29,933	45,324
544.62	27,519	16,598	545.64	29,981	45,923
544.64	27,568	17,149	545.66	30,029	46,524
544.66	27,616	17,701	545.68	30,078	47,125
544.68	27,664	18,254	545.70	30,126	47,727
544.70	27,712	18,807	545.72	30,174	48,330
544.72	27,761	19,362	545.74	30,222	48,934
544.74	27,809	19,918	545.76	30,271	49,539
544.76	27,857	20,474	545.78	30,319	50,144
544.78	27,906	21,032	545.80	30,367	50,751
544.80	27,954	21,591	545.82	30,416	51,359
544.82	28,002	22,150	545.84	30,464	51,968
544.84	28,050	22,711	545.86	30,512	52,578
544.86	28,099	23,272	545.88	30,560	53,188
544.88	28,147	23,835	545.90	30,609	53,800
544.90	28,195	24,398	545.92	30,657	54,413
544.92	28,243	24,963	545.94	30,705	55,026
544.94	28,292	25,528	545.96	30,753	55,641
544.96	28,340	26,094	545.98	30,802	56,256
544.98	28,388	26,662	546.00	**30,850**	**56,873**
545.00	28,437	27,230			

Summary for Pond 33P: Basin 11

Inflow Area = 84,693 sf, 77.02% Impervious, Inflow Depth = 4.44" for 10-Year event
Inflow = 7.66 cfs @ 12.17 hrs, Volume= 31,349 cf
Outflow = 5.55 cfs @ 12.26 hrs, Volume= 31,349 cf, Atten= 28%, Lag= 5.4 min
Discarded = 3.13 cfs @ 12.00 hrs, Volume= 29,272 cf
Primary = 2.42 cfs @ 12.26 hrs, Volume= 2,077 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 590.38' @ 12.26 hrs Surf.Area= 13,504 sf Storage= 2,065 cf

Plug-Flow detention time= 1.9 min calculated for 31,334 cf (100% of inflow)
Center-of-Mass det. time= 1.9 min (766.8 - 764.9)

Volume	Invert	Avail.Storage	Storage Description
#1	590.00'	13,072 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 32,680 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
590.00	13,504	0	0
591.00	13,504	13,504	13,504
592.00	13,504	13,504	27,008
592.42	13,504	5,672	32,680

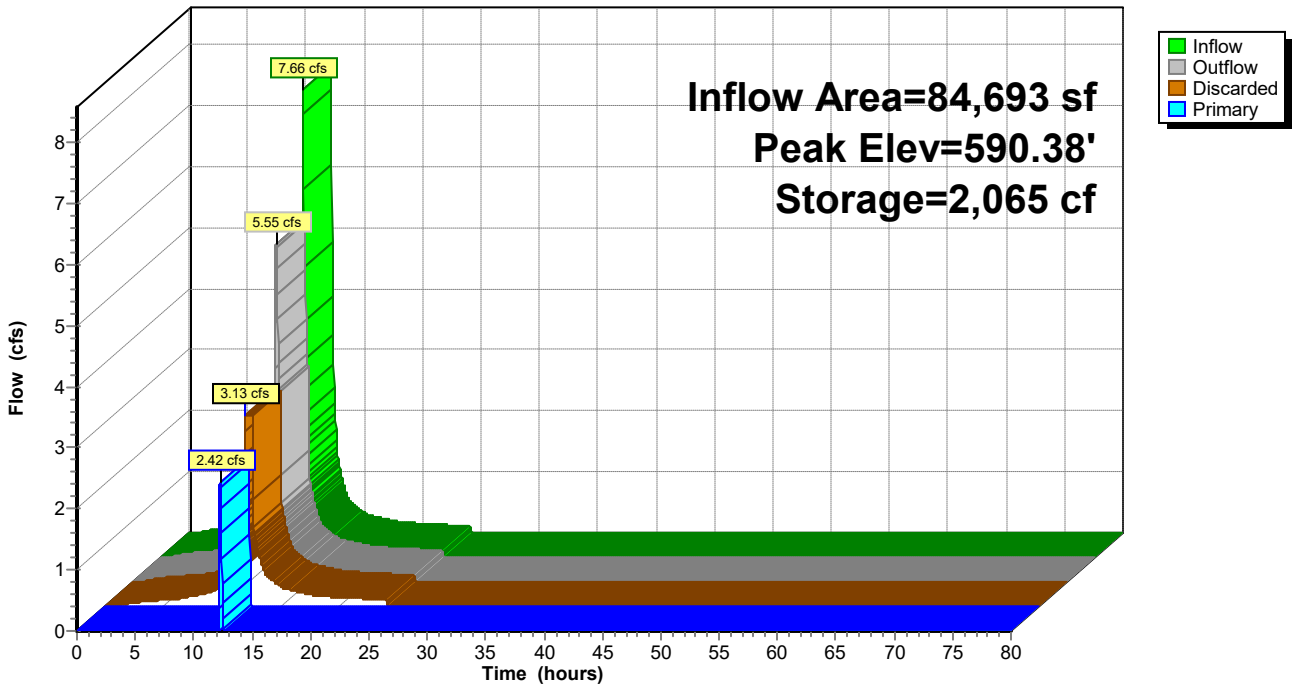
Device	Routing	Invert	Outlet Devices
#1	Primary	590.10'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	590.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=3.13 cfs @ 12.00 hrs HW=590.03' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 3.13 cfs)

Primary OutFlow Max=2.36 cfs @ 12.26 hrs HW=590.38' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 2.36 cfs @ 1.72 fps)

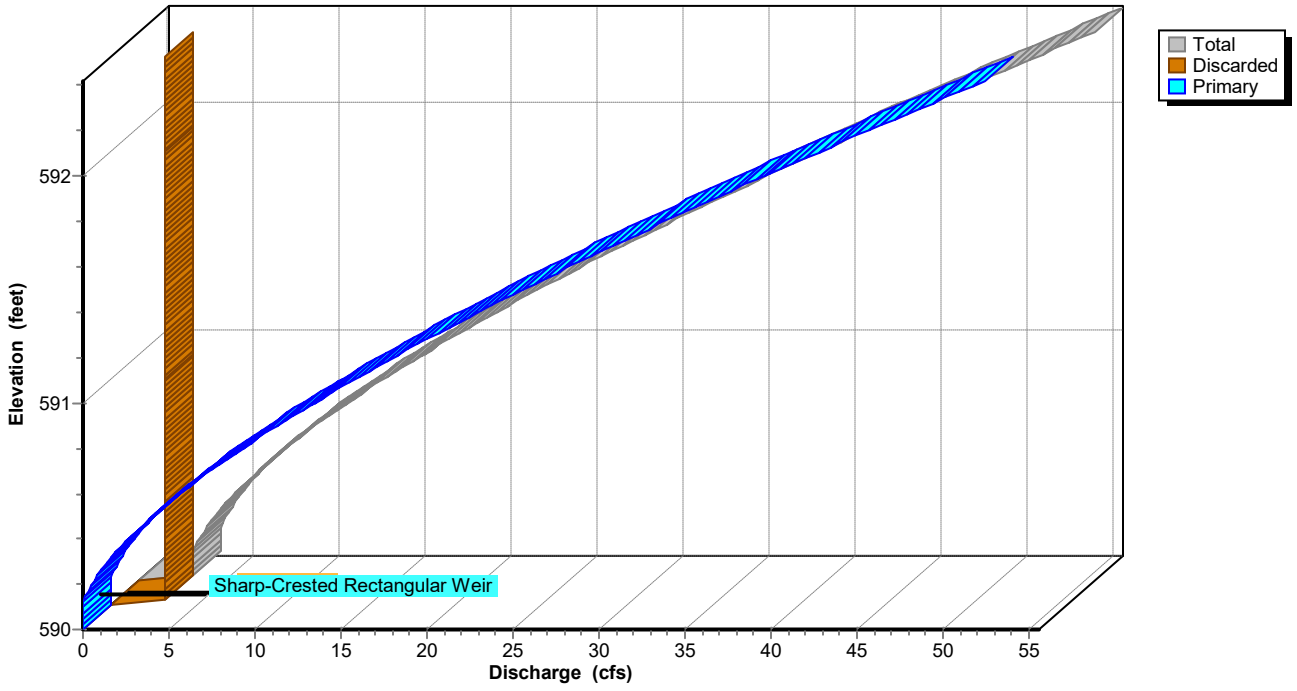
Pond 33P: Basin 11

Hydrograph



Pond 33P: Basin 11

Stage-Discharge



Hydrograph for Pond 33P: Basin 11

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	590.00	0.00	0.00	0.00
2.00	0.05	2	590.00	0.05	0.05	0.00
4.00	0.09	4	590.00	0.09	0.09	0.00
6.00	0.12	5	590.00	0.12	0.12	0.00
8.00	0.19	8	590.00	0.19	0.19	0.00
10.00	0.36	15	590.00	0.36	0.36	0.00
12.00	**3.65**	**167**	**590.03**	**3.13**	**3.13**	**0.00**
14.00	**0.48**	**20**	**590.00**	**0.48**	0.48	**0.00**
16.00	0.27	11	590.00	0.27	0.27	0.00
18.00	0.18	8	590.00	0.18	0.18	0.00
20.00	0.15	6	590.00	0.15	0.15	0.00
22.00	0.13	5	590.00	0.13	0.13	0.00
24.00	0.11	5	590.00	0.11	0.11	0.00
26.00	0.00	0	590.00	0.00	0.00	0.00
28.00	0.00	0	590.00	0.00	0.00	0.00
30.00	0.00	0	590.00	0.00	0.00	0.00
32.00	0.00	0	590.00	0.00	0.00	0.00
34.00	0.00	0	590.00	0.00	0.00	0.00
36.00	0.00	0	590.00	0.00	0.00	0.00
38.00	0.00	0	590.00	0.00	0.00	0.00
40.00	0.00	0	590.00	0.00	0.00	0.00
42.00	0.00	0	590.00	0.00	0.00	0.00
44.00	0.00	0	590.00	0.00	0.00	0.00
46.00	0.00	0	590.00	0.00	0.00	0.00
48.00	0.00	0	590.00	0.00	0.00	0.00
50.00	0.00	0	590.00	0.00	0.00	0.00
52.00	0.00	0	590.00	0.00	0.00	0.00
54.00	0.00	0	590.00	0.00	0.00	0.00
56.00	0.00	0	590.00	0.00	0.00	0.00
58.00	0.00	0	590.00	0.00	0.00	0.00
60.00	0.00	0	590.00	0.00	0.00	0.00
62.00	0.00	0	590.00	0.00	0.00	0.00
64.00	0.00	0	590.00	0.00	0.00	0.00
66.00	0.00	0	590.00	0.00	0.00	0.00
68.00	0.00	0	590.00	0.00	0.00	0.00
70.00	0.00	0	590.00	0.00	0.00	0.00
72.00	0.00	0	590.00	0.00	0.00	0.00
74.00	0.00	0	590.00	0.00	0.00	0.00
76.00	0.00	0	590.00	0.00	0.00	0.00
78.00	0.00	0	590.00	0.00	0.00	0.00
80.00	0.00	0	590.00	0.00	0.00	0.00

Stage-Discharge for Pond 33P: Basin 11

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
590.00	0.00	**0.00**	0.00
590.05	3.13	**3.13**	0.00
590.10	3.13	3.13	0.00
590.15	3.31	3.13	0.18
590.20	3.64	3.13	0.51
590.25	4.07	3.13	0.94
590.30	4.58	3.13	1.45
590.35	5.15	3.13	2.02
590.40	5.78	3.13	2.65
590.45	6.46	3.13	3.34
590.50	7.20	3.13	4.07
590.55	7.97	3.13	4.85
590.60	8.79	3.13	5.66
590.65	9.65	3.13	6.52
590.70	10.54	3.13	7.42
590.75	11.47	3.13	8.35
590.80	12.43	3.13	9.31
590.85	13.43	3.13	10.30
590.90	14.45	3.13	11.32
590.95	15.50	3.13	12.38
591.00	16.58	3.13	13.46
591.05	17.69	3.13	14.56
591.10	18.82	3.13	15.70
591.15	19.98	3.13	16.85
591.20	21.16	3.13	18.03
591.25	22.36	3.13	19.24
591.30	23.59	3.13	20.46
591.35	24.83	3.13	21.71
591.40	26.10	3.13	22.97
591.45	27.39	3.13	24.26
591.50	28.69	3.13	25.57
591.55	30.02	3.13	26.89
591.60	31.36	3.13	28.23
591.65	32.72	3.13	29.59
591.70	34.10	3.13	30.97
591.75	35.49	3.13	32.37
591.80	36.90	3.13	33.78
591.85	38.33	3.13	35.20
591.90	39.77	3.13	36.64
591.95	41.22	3.13	38.10
592.00	42.69	3.13	39.57
592.05	44.17	3.13	41.05
592.10	45.67	3.13	42.55
592.15	47.18	3.13	44.05
592.20	48.70	3.13	45.58
592.25	50.24	3.13	47.11
592.30	51.78	3.13	48.66
592.35	53.34	3.13	50.21
592.40	**54.91**	3.13	**51.78**

Stage-Area-Storage for Pond 33P: Basin 11

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
590.00	**13,504**	0
590.05	13,504	270
590.10	13,504	540
590.15	13,504	810
590.20	13,504	1,080
590.25	13,504	1,350
590.30	13,504	1,620
590.35	13,504	1,891
590.40	13,504	2,161
590.45	13,504	2,431
590.50	13,504	2,701
590.55	13,504	2,971
590.60	13,504	3,241
590.65	13,504	3,511
590.70	13,504	3,781
590.75	13,504	4,051
590.80	13,504	4,321
590.85	13,504	4,591
590.90	13,504	4,861
590.95	13,504	5,132
591.00	13,504	5,402
591.05	13,504	5,672
591.10	13,504	5,942
591.15	13,504	6,212
591.20	13,504	6,482
591.25	13,504	6,752
591.30	13,504	7,022
591.35	13,504	7,292
591.40	13,504	7,562
591.45	13,504	7,832
591.50	13,504	8,102
591.55	13,504	8,372
591.60	13,504	8,643
591.65	13,504	8,913
591.70	13,504	9,183
591.75	13,504	9,453
591.80	13,504	9,723
591.85	13,504	9,993
591.90	13,504	10,263
591.95	13,504	10,533
592.00	13,504	10,803
592.05	13,504	11,073
592.10	13,504	11,343
592.15	13,504	11,613
592.20	13,504	11,884
592.25	13,504	12,154
592.30	13,504	12,424
592.35	13,504	12,694
592.40	13,504	**12,964**

Summary for Pond 41P: Basin 10

Inflow Area = 97,058 sf, 61.64% Impervious, Inflow Depth = 4.08" for 10-Year event
Inflow = 7.95 cfs @ 12.18 hrs, Volume= 32,998 cf
Outflow = 6.87 cfs @ 12.24 hrs, Volume= 32,998 cf, Atten= 14%, Lag= 3.8 min
Discarded = 2.22 cfs @ 11.92 hrs, Volume= 28,973 cf
Primary = 4.66 cfs @ 12.24 hrs, Volume= 4,025 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 576.28' @ 12.24 hrs Surf.Area= 9,583 sf Storage= 2,690 cf

Plug-Flow detention time= 4.3 min calculated for 32,998 cf (100% of inflow)
Center-of-Mass det. time= 4.3 min (780.5 - 776.2)

Volume	Invert	Avail.Storage	Storage Description
#1	576.00'	28,749 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
576.00	9,583	0	0
577.00	9,583	9,583	9,583
578.00	9,583	9,583	19,166
579.00	9,583	9,583	28,749

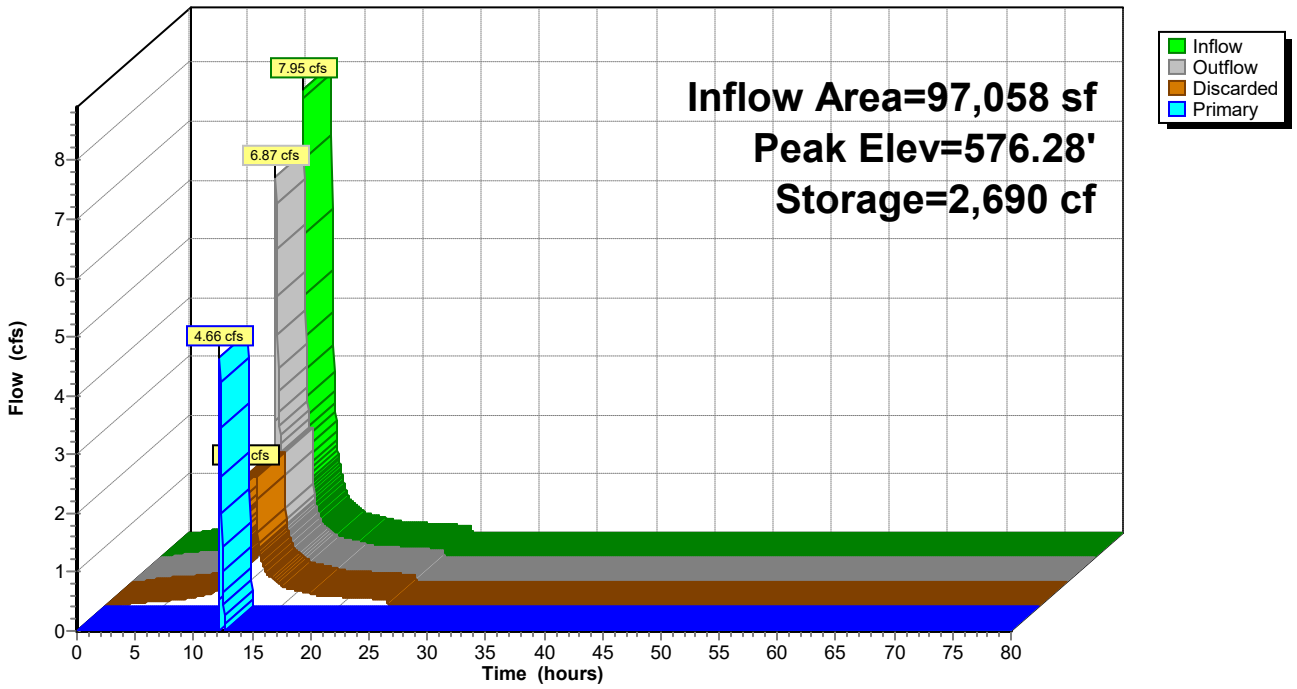
Device	Routing	Invert	Outlet Devices
#1	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	576.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=2.22 cfs @ 11.92 hrs HW=576.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 2.22 cfs)

Primary OutFlow Max=4.60 cfs @ 12.24 hrs HW=576.28' (Free Discharge)
├**1=Grate** (Weir Controls 2.30 cfs @ 1.18 fps)
└**2=Grate** (Weir Controls 2.30 cfs @ 1.18 fps)

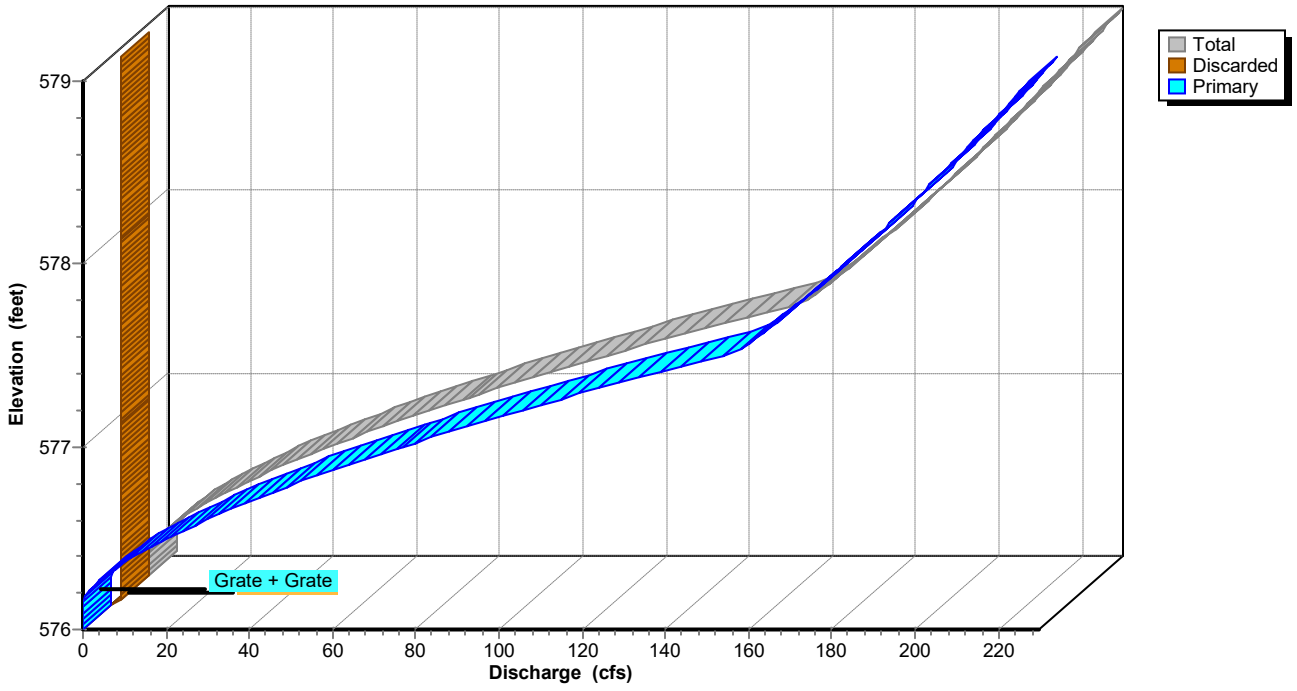
Pond 41P: Basin 10

Hydrograph



Pond 41P: Basin 10

Stage-Discharge



Hydrograph for Pond 41P: Basin 10

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	576.00	0.00	0.00	0.00
2.00	0.04	5	576.00	0.04	0.04	0.00
4.00	0.08	11	576.00	0.08	0.08	0.00
6.00	0.11	14	576.00	0.11	0.11	0.00
8.00	0.18	23	576.00	0.17	0.17	0.00
10.00	0.35	45	576.00	0.34	**0.34**	0.00
12.00	**3.62**	**551**	**576.06**	**2.22**	**2.22**	**0.00**
14.00	**0.53**	**70**	**576.01**	**0.54**	0.54	**0.00**
16.00	0.29	38	576.00	0.30	0.30	0.00
18.00	0.20	26	576.00	0.20	0.20	0.00
20.00	0.17	22	576.00	0.17	0.17	0.00
22.00	0.14	19	576.00	0.15	0.15	0.00
24.00	0.12	16	576.00	0.12	0.12	0.00
26.00	0.00	0	576.00	0.00	0.00	0.00
28.00	0.00	0	576.00	0.00	0.00	0.00
30.00	0.00	0	576.00	0.00	0.00	0.00
32.00	0.00	0	576.00	0.00	0.00	0.00
34.00	0.00	0	576.00	0.00	0.00	0.00
36.00	0.00	0	576.00	0.00	0.00	0.00
38.00	0.00	0	576.00	0.00	0.00	0.00
40.00	0.00	0	576.00	0.00	0.00	0.00
42.00	0.00	0	576.00	0.00	0.00	0.00
44.00	0.00	0	576.00	0.00	0.00	0.00
46.00	0.00	0	576.00	0.00	0.00	0.00
48.00	0.00	0	576.00	0.00	0.00	0.00
50.00	0.00	0	576.00	0.00	0.00	0.00
52.00	0.00	0	576.00	0.00	0.00	0.00
54.00	0.00	0	576.00	0.00	0.00	0.00
56.00	0.00	0	576.00	0.00	0.00	0.00
58.00	0.00	0	576.00	0.00	0.00	0.00
60.00	0.00	0	576.00	0.00	0.00	0.00
62.00	0.00	0	576.00	0.00	0.00	0.00
64.00	0.00	0	576.00	0.00	0.00	0.00
66.00	0.00	0	576.00	0.00	0.00	0.00
68.00	0.00	0	576.00	0.00	0.00	0.00
70.00	0.00	0	576.00	0.00	0.00	0.00
72.00	0.00	0	576.00	0.00	0.00	0.00
74.00	0.00	0	576.00	0.00	0.00	0.00
76.00	0.00	0	576.00	0.00	0.00	0.00
78.00	0.00	0	576.00	0.00	0.00	0.00
80.00	0.00	0	576.00	0.00	0.00	0.00

Stage-Discharge for Pond 41P: Basin 10

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
576.00	0.00	**0.00**	0.00
576.05	2.22	**2.22**	0.00
576.10	2.22	2.22	0.00
576.15	2.22	2.22	0.00
576.20	3.32	2.22	1.10
576.25	5.32	2.22	3.10
576.30	7.92	2.22	5.70
576.35	10.99	2.22	8.77
576.40	14.48	2.22	12.26
576.45	18.34	2.22	16.12
576.50	22.53	2.22	20.31
576.55	27.04	2.22	24.82
576.60	31.83	2.22	29.61
576.65	36.90	2.22	34.68
576.70	42.23	2.22	40.01
576.75	47.81	2.22	45.59
576.80	53.63	2.22	51.41
576.85	59.67	2.22	57.45
576.90	65.94	2.22	63.72
576.95	72.41	2.22	70.19
577.00	79.10	2.22	76.88
577.05	85.98	2.22	83.76
577.10	93.05	2.22	90.84
577.15	100.32	2.22	98.10
577.20	107.77	2.22	105.55
577.25	115.40	2.22	113.18
577.30	123.20	2.22	120.98
577.35	131.17	2.22	128.96
577.40	139.32	2.22	137.10
577.45	147.62	2.22	145.41
577.50	156.09	2.22	153.88
577.55	161.74	2.22	159.52
577.60	164.56	2.22	162.34
577.65	167.34	2.22	165.12
577.70	170.07	2.22	167.85
577.75	172.75	2.22	170.53
577.80	175.40	2.22	173.18
577.85	178.00	2.22	175.78
577.90	180.57	2.22	178.35
577.95	183.10	2.22	180.88
578.00	185.59	2.22	183.37
578.05	188.05	2.22	185.84
578.10	190.48	2.22	188.26
578.15	192.88	2.22	190.66
578.20	195.25	2.22	193.03
578.25	197.59	2.22	195.37
578.30	199.90	2.22	197.68
578.35	202.19	2.22	199.97
578.40	204.45	2.22	202.23
578.45	206.68	2.22	204.46
578.50	208.89	2.22	206.67
578.55	211.08	2.22	208.86
578.60	213.24	2.22	211.03
578.65	215.39	2.22	213.17
578.70	217.51	2.22	215.29
578.75	219.61	2.22	217.39
578.80	221.69	2.22	219.47
578.85	223.75	2.22	221.53
578.90	225.79	2.22	223.57
578.95	227.81	2.22	225.60
579.00	**229.82**	2.22	**227.60**

Stage-Area-Storage for Pond 41P: Basin 10

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
576.00	**9,583**	0
576.05	9,583	479
576.10	9,583	958
576.15	9,583	1,437
576.20	9,583	1,917
576.25	9,583	2,396
576.30	9,583	2,875
576.35	9,583	3,354
576.40	9,583	3,833
576.45	9,583	4,312
576.50	9,583	4,792
576.55	9,583	5,271
576.60	9,583	5,750
576.65	9,583	6,229
576.70	9,583	6,708
576.75	9,583	7,187
576.80	9,583	7,666
576.85	9,583	8,146
576.90	9,583	8,625
576.95	9,583	9,104
577.00	9,583	9,583
577.05	9,583	10,062
577.10	9,583	10,541
577.15	9,583	11,020
577.20	9,583	11,500
577.25	9,583	11,979
577.30	9,583	12,458
577.35	9,583	12,937
577.40	9,583	13,416
577.45	9,583	13,895
577.50	9,583	14,375
577.55	9,583	14,854
577.60	9,583	15,333
577.65	9,583	15,812
577.70	9,583	16,291
577.75	9,583	16,770
577.80	9,583	17,249
577.85	9,583	17,729
577.90	9,583	18,208
577.95	9,583	18,687
578.00	9,583	19,166
578.05	9,583	19,645
578.10	9,583	20,124
578.15	9,583	20,603
578.20	9,583	21,083
578.25	9,583	21,562
578.30	9,583	22,041
578.35	9,583	22,520
578.40	9,583	22,999
578.45	9,583	23,478
578.50	9,583	23,958
578.55	9,583	24,437
578.60	9,583	24,916
578.65	9,583	25,395
578.70	9,583	25,874
578.75	9,583	26,353
578.80	9,583	26,832
578.85	9,583	27,312
578.90	9,583	27,791
578.95	9,583	28,270
579.00	9,583	**28,749**

Summary for Pond 42P: Basin 9

Inflow Area = 25,049 sf, 64.41% Impervious, Inflow Depth = 4.24" for 10-Year event
Inflow = 2.38 cfs @ 12.14 hrs, Volume= 8,853 cf
Outflow = 0.61 cfs @ 11.88 hrs, Volume= 8,853 cf, Atten= 75%, Lag= 0.0 min
Discarded = 0.61 cfs @ 11.88 hrs, Volume= 8,853 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 562.57' @ 12.44 hrs Surf.Area= 6,534 sf Storage= 1,499 cf

Plug-Flow detention time= 12.1 min calculated for 8,849 cf (100% of inflow)
Center-of-Mass det. time= 12.1 min (782.8 - 770.8)

Volume	Invert	Avail.Storage	Storage Description
#1	562.00'	6,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 15,812 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
562.00	6,534	0	0
563.00	6,534	6,534	6,534
564.00	6,534	6,534	13,068
564.42	6,534	2,744	15,812

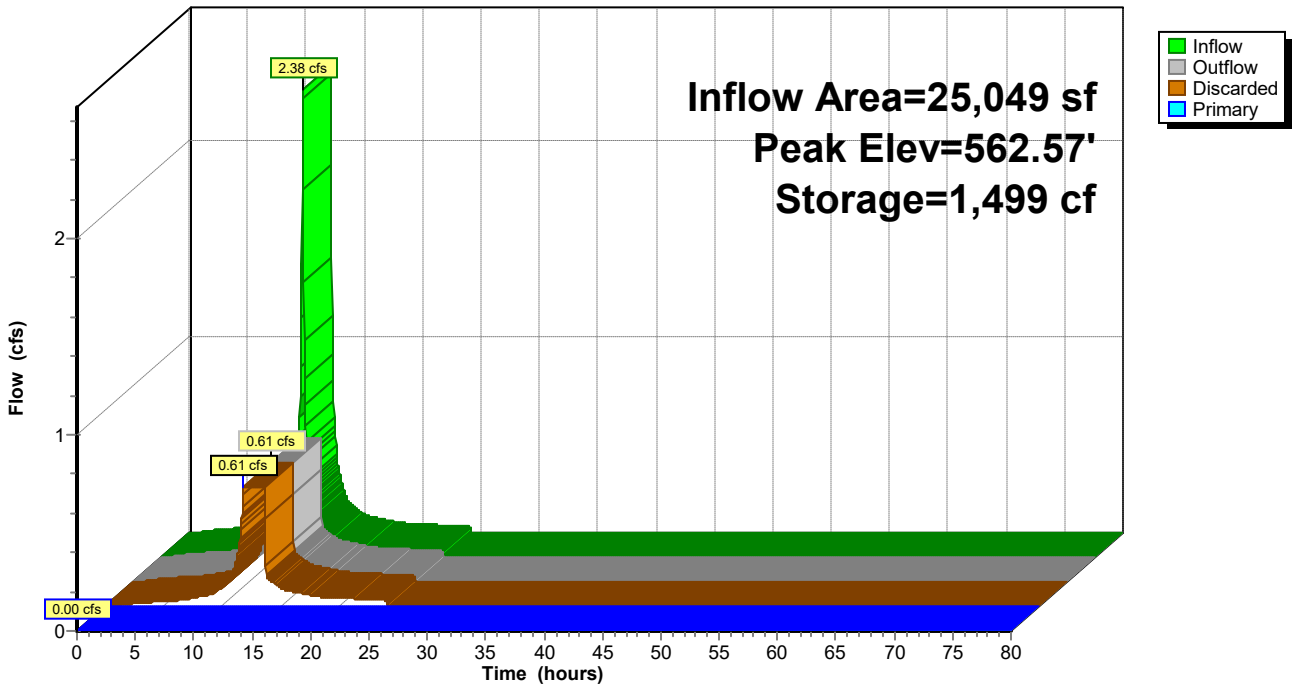
Device	Routing	Invert	Outlet Devices
#1	Primary	564.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	563.00'	**3.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	562.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.61 cfs @ 11.88 hrs HW=562.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.61 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=562.00' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Controls 0.00 cfs)

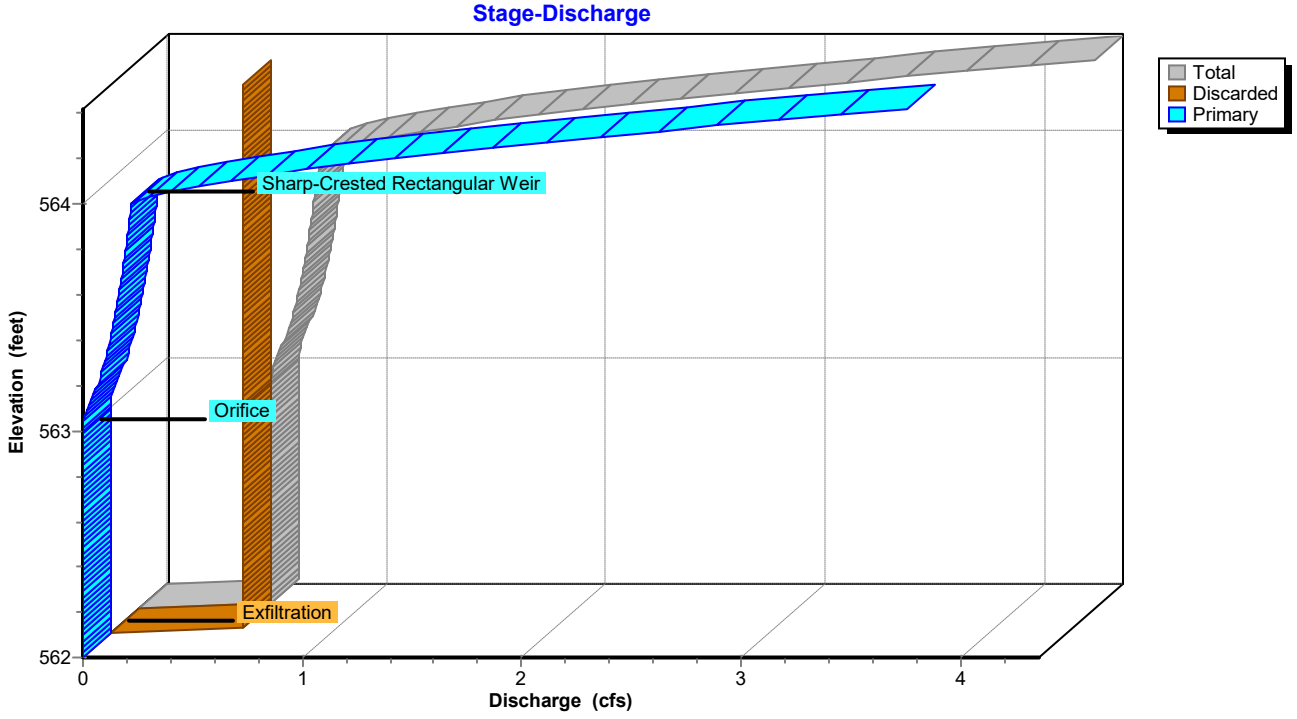
Pond 42P: Basin 9

Hydrograph



Pond 42P: Basin 9

Stage-Discharge



Hydrograph for Pond 42P: Basin 9

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	562.00	0.00	0.00	**0.00**
2.00	0.01	1	562.00	0.01	0.01	0.00
4.00	0.02	2	562.00	0.02	0.02	0.00
6.00	0.03	3	562.00	0.03	0.03	0.00
8.00	0.05	5	562.00	0.05	0.05	0.00
10.00	0.10	10	562.00	**0.10**	**0.10**	0.00
12.00	**1.22**	**207**	**562.08**	**0.61**	**0.61**	0.00
14.00	**0.14**	**15**	**562.01**	0.14	0.14	0.00
16.00	0.08	8	562.00	0.08	0.08	0.00
18.00	0.05	5	562.00	0.05	0.05	0.00
20.00	0.04	5	562.00	0.04	0.04	0.00
22.00	0.04	4	562.00	0.04	0.04	0.00
24.00	0.03	3	562.00	0.03	0.03	0.00
26.00	0.00	0	562.00	0.00	0.00	0.00
28.00	0.00	0	562.00	0.00	0.00	0.00
30.00	0.00	0	562.00	0.00	0.00	0.00
32.00	0.00	0	562.00	0.00	0.00	0.00
34.00	0.00	0	562.00	0.00	0.00	0.00
36.00	0.00	0	562.00	0.00	0.00	0.00
38.00	0.00	0	562.00	0.00	0.00	0.00
40.00	0.00	0	562.00	0.00	0.00	0.00
42.00	0.00	0	562.00	0.00	0.00	0.00
44.00	0.00	0	562.00	0.00	0.00	0.00
46.00	0.00	0	562.00	0.00	0.00	0.00
48.00	0.00	0	562.00	0.00	0.00	0.00
50.00	0.00	0	562.00	0.00	0.00	0.00
52.00	0.00	0	562.00	0.00	0.00	0.00
54.00	0.00	0	562.00	0.00	0.00	0.00
56.00	0.00	0	562.00	0.00	0.00	0.00
58.00	0.00	0	562.00	0.00	0.00	0.00
60.00	0.00	0	562.00	0.00	0.00	0.00
62.00	0.00	0	562.00	0.00	0.00	0.00
64.00	0.00	0	562.00	0.00	0.00	0.00
66.00	0.00	0	562.00	0.00	0.00	0.00
68.00	0.00	0	562.00	0.00	0.00	0.00
70.00	0.00	0	562.00	0.00	0.00	0.00
72.00	0.00	0	562.00	0.00	0.00	0.00
74.00	0.00	0	562.00	0.00	0.00	0.00
76.00	0.00	0	562.00	0.00	0.00	0.00
78.00	0.00	0	562.00	0.00	0.00	0.00
80.00	0.00	0	562.00	0.00	0.00	0.00

Stage-Discharge for Pond 42P: Basin 9

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
562.00	0.00	**0.00**	0.00
562.05	0.61	**0.61**	0.00
562.10	0.61	0.61	0.00
562.15	0.61	0.61	0.00
562.20	0.61	0.61	0.00
562.25	0.61	0.61	0.00
562.30	0.61	0.61	0.00
562.35	0.61	0.61	0.00
562.40	0.61	0.61	0.00
562.45	0.61	0.61	0.00
562.50	0.61	0.61	0.00
562.55	0.61	0.61	0.00
562.60	0.61	0.61	0.00
562.65	0.61	0.61	0.00
562.70	0.61	0.61	0.00
562.75	0.61	0.61	0.00
562.80	0.61	0.61	0.00
562.85	0.61	0.61	0.00
562.90	0.61	0.61	0.00
562.95	0.61	0.61	0.00
563.00	0.61	0.61	0.00
563.05	0.61	0.61	0.01
563.10	0.62	0.61	0.02
563.15	0.65	0.61	0.04
563.20	0.67	0.61	0.06
563.25	0.69	0.61	0.08
563.30	0.70	0.61	0.10
563.35	0.72	0.61	0.11
563.40	0.73	0.61	0.12
563.45	0.74	0.61	0.13
563.50	0.75	0.61	0.14
563.55	0.76	0.61	0.15
563.60	0.77	0.61	0.16
563.65	0.78	0.61	0.17
563.70	0.78	0.61	0.18
563.75	0.79	0.61	0.19
563.80	0.80	0.61	0.19
563.85	0.81	0.61	0.20
563.90	0.81	0.61	0.21
563.95	0.82	0.61	0.21
564.00	0.83	0.61	0.22
564.05	0.98	0.61	0.37
564.10	1.25	0.61	0.64
564.15	1.60	0.61	0.99
564.20	2.01	0.61	1.40
564.25	2.47	0.61	1.87
564.30	2.98	0.61	2.37
564.35	3.53	0.61	2.92
564.40	**4.11**	0.61	**3.51**

Stage-Area-Storage for Pond 42P: Basin 9

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
562.00	**6,534**	0
562.05	6,534	131
562.10	6,534	261
562.15	6,534	392
562.20	6,534	523
562.25	6,534	653
562.30	6,534	784
562.35	6,534	915
562.40	6,534	1,045
562.45	6,534	1,176
562.50	6,534	1,307
562.55	6,534	1,437
562.60	6,534	1,568
562.65	6,534	1,699
562.70	6,534	1,830
562.75	6,534	1,960
562.80	6,534	2,091
562.85	6,534	2,222
562.90	6,534	2,352
562.95	6,534	2,483
563.00	6,534	2,614
563.05	6,534	2,744
563.10	6,534	2,875
563.15	6,534	3,006
563.20	6,534	3,136
563.25	6,534	3,267
563.30	6,534	3,398
563.35	6,534	3,528
563.40	6,534	3,659
563.45	6,534	3,790
563.50	6,534	3,920
563.55	6,534	4,051
563.60	6,534	4,182
563.65	6,534	4,312
563.70	6,534	4,443
563.75	6,534	4,574
563.80	6,534	4,704
563.85	6,534	4,835
563.90	6,534	4,966
563.95	6,534	5,097
564.00	6,534	5,227
564.05	6,534	5,358
564.10	6,534	5,489
564.15	6,534	5,619
564.20	6,534	5,750
564.25	6,534	5,881
564.30	6,534	6,011
564.35	6,534	6,142
564.40	6,534	**6,273**

Summary for Pond 48P: Basin 8

Inflow Area = 62,190 sf, 63.36% Impervious, Inflow Depth = 4.19" for 10-Year event
Inflow = 5.63 cfs @ 12.16 hrs, Volume= 21,694 cf
Outflow = 1.54 cfs @ 12.45 hrs, Volume= 21,694 cf, Atten= 73%, Lag= 17.6 min
Discarded = 0.93 cfs @ 11.68 hrs, Volume= 19,658 cf
Primary = 0.61 cfs @ 12.45 hrs, Volume= 2,036 cf
Routed to Pond 49P : Basin 7

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 574.11' @ 12.45 hrs Surf.Area= 10,019 sf Storage= 4,465 cf

Plug-Flow detention time= 19.6 min calculated for 21,683 cf (100% of inflow)
Center-of-Mass det. time= 19.6 min (792.4 - 772.8)

Volume	Invert	Avail.Storage	Storage Description
#1	573.00'	12,023 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 30,057 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
573.00	10,019	0	0
574.00	10,019	10,019	10,019
575.00	10,019	10,019	20,038
576.00	10,019	10,019	30,057

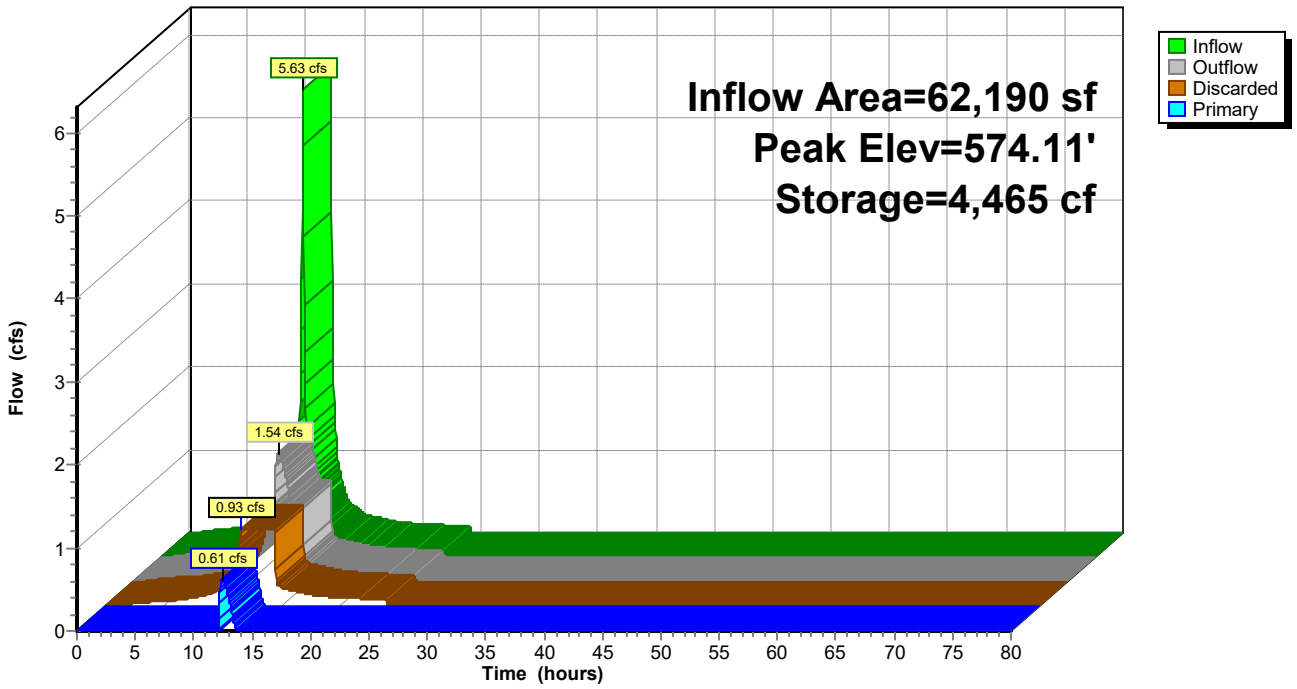
Device	Routing	Invert	Outlet Devices
#1	Primary	575.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	573.45'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	573.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.93 cfs @ 11.68 hrs HW=573.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.93 cfs)

Primary OutFlow Max=0.61 cfs @ 12.45 hrs HW=574.11' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Orifice Controls 0.61 cfs @ 3.10 fps)

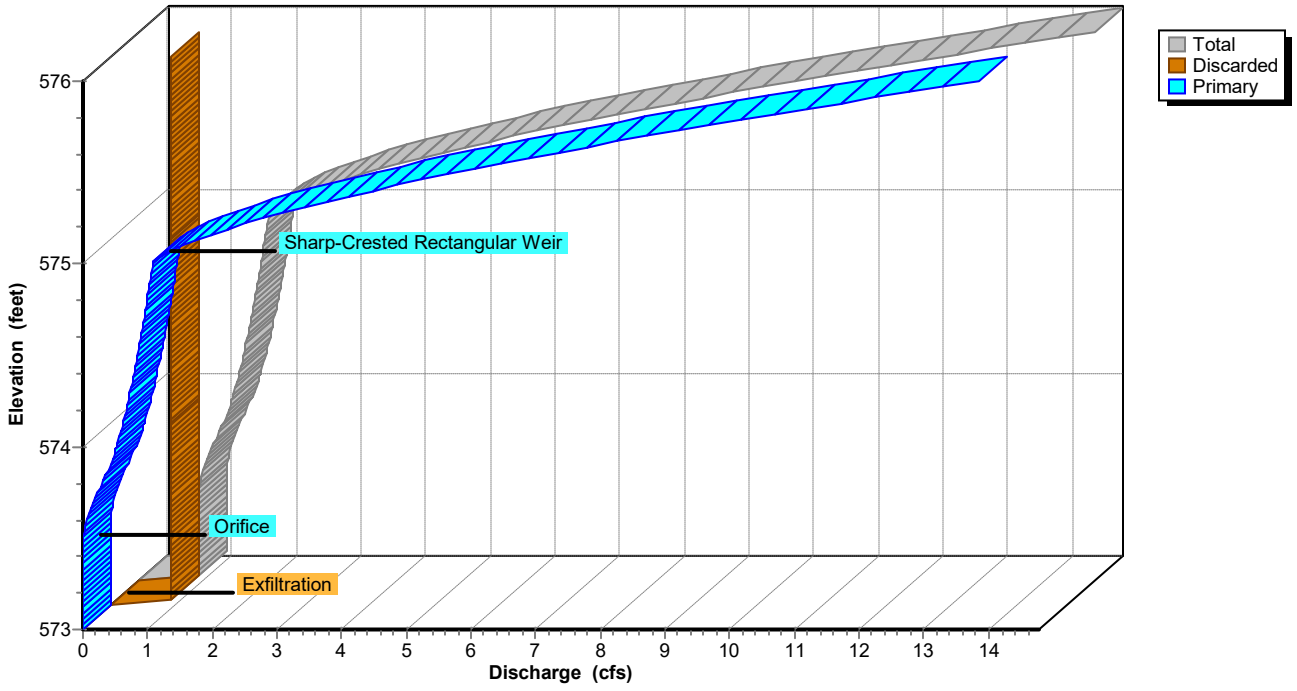
Pond 48P: Basin 8

Hydrograph



Pond 48P: Basin 8

Stage-Discharge



Hydrograph for Pond 48P: Basin 8

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	573.00	0.00	0.00	0.00
2.00	0.03	4	573.00	0.03	0.03	0.00
4.00	0.06	7	573.00	0.06	0.06	0.00
6.00	0.07	9	573.00	0.07	0.07	0.00
8.00	0.12	15	573.00	0.12	0.12	0.00
10.00	0.24	30	573.01	0.23	**0.23**	0.00
12.00	**2.74**	**879**	**573.22**	**0.93**	**0.93**	**0.00**
14.00	**0.34**	**1,445**	**573.36**	**0.93**	0.93	**0.00**
16.00	0.19	25	573.01	0.19	0.19	0.00
18.00	0.13	17	573.00	0.13	0.13	0.00
20.00	0.11	14	573.00	0.11	0.11	0.00
22.00	0.09	12	573.00	0.09	0.09	0.00
24.00	0.08	10	573.00	0.08	0.08	0.00
26.00	0.00	0	573.00	0.00	0.00	0.00
28.00	0.00	0	573.00	0.00	0.00	0.00
30.00	0.00	0	573.00	0.00	0.00	0.00
32.00	0.00	0	573.00	0.00	0.00	0.00
34.00	0.00	0	573.00	0.00	0.00	0.00
36.00	0.00	0	573.00	0.00	0.00	0.00
38.00	0.00	0	573.00	0.00	0.00	0.00
40.00	0.00	0	573.00	0.00	0.00	0.00
42.00	0.00	0	573.00	0.00	0.00	0.00
44.00	0.00	0	573.00	0.00	0.00	0.00
46.00	0.00	0	573.00	0.00	0.00	0.00
48.00	0.00	0	573.00	0.00	0.00	0.00
50.00	0.00	0	573.00	0.00	0.00	0.00
52.00	0.00	0	573.00	0.00	0.00	0.00
54.00	0.00	0	573.00	0.00	0.00	0.00
56.00	0.00	0	573.00	0.00	0.00	0.00
58.00	0.00	0	573.00	0.00	0.00	0.00
60.00	0.00	0	573.00	0.00	0.00	0.00
62.00	0.00	0	573.00	0.00	0.00	0.00
64.00	0.00	0	573.00	0.00	0.00	0.00
66.00	0.00	0	573.00	0.00	0.00	0.00
68.00	0.00	0	573.00	0.00	0.00	0.00
70.00	0.00	0	573.00	0.00	0.00	0.00
72.00	0.00	0	573.00	0.00	0.00	0.00
74.00	0.00	0	573.00	0.00	0.00	0.00
76.00	0.00	0	573.00	0.00	0.00	0.00
78.00	0.00	0	573.00	0.00	0.00	0.00
80.00	0.00	0	573.00	0.00	0.00	0.00

Stage-Discharge for Pond 48P: Basin 8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
573.00	0.00	**0.00**	0.00
573.05	0.93	**0.93**	0.00
573.10	0.93	0.93	0.00
573.15	0.93	0.93	0.00
573.20	0.93	0.93	0.00
573.25	0.93	0.93	0.00
573.30	0.93	0.93	0.00
573.35	0.93	0.93	0.00
573.40	0.93	0.93	0.00
573.45	0.93	0.93	0.00
573.50	0.94	0.93	0.01
573.55	0.96	0.93	0.03
573.60	0.99	0.93	0.07
573.65	1.04	0.93	0.11
573.70	1.09	0.93	0.17
573.75	1.16	0.93	0.23
573.80	1.22	0.93	0.30
573.85	1.29	0.93	0.36
573.90	1.35	0.93	0.43
573.95	1.40	0.93	0.47
574.00	1.45	0.93	0.52
574.05	1.49	0.93	0.56
574.10	1.53	0.93	0.60
574.15	1.56	0.93	0.63
574.20	1.60	0.93	0.67
574.25	1.63	0.93	0.70
574.30	1.66	0.93	0.73
574.35	1.69	0.93	0.76
574.40	1.72	0.93	0.79
574.45	1.75	0.93	0.82
574.50	1.77	0.93	0.85
574.55	1.80	0.93	0.87
574.60	1.82	0.93	0.90
574.65	1.85	0.93	0.92
574.70	1.87	0.93	0.95
574.75	1.90	0.93	0.97
574.80	1.92	0.93	0.99
574.85	1.94	0.93	1.01
574.90	1.96	0.93	1.04
574.95	1.98	0.93	1.06
575.00	2.01	0.93	1.08
575.05	2.17	0.93	1.24
575.10	2.46	0.93	1.53
575.15	2.82	0.93	1.89
575.20	3.24	0.93	2.32
575.25	3.72	0.93	2.79
575.30	4.24	0.93	3.31
575.35	4.80	0.93	3.88
575.40	5.40	0.93	4.48
575.45	6.04	0.93	5.11
575.50	6.70	0.93	5.78
575.55	7.40	0.93	6.47
575.60	8.13	0.93	7.20
575.65	8.88	0.93	7.95
575.70	9.66	0.93	8.73
575.75	10.46	0.93	9.53
575.80	11.28	0.93	10.35
575.85	12.13	0.93	11.20
575.90	13.00	0.93	12.07
575.95	13.88	0.93	12.95
576.00	**14.79**	0.93	**13.86**

Stage-Area-Storage for Pond 48P: Basin 8

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
573.00	**10,019**	0
573.05	10,019	200
573.10	10,019	401
573.15	10,019	601
573.20	10,019	802
573.25	10,019	1,002
573.30	10,019	1,202
573.35	10,019	1,403
573.40	10,019	1,603
573.45	10,019	1,803
573.50	10,019	2,004
573.55	10,019	2,204
573.60	10,019	2,405
573.65	10,019	2,605
573.70	10,019	2,805
573.75	10,019	3,006
573.80	10,019	3,206
573.85	10,019	3,406
573.90	10,019	3,607
573.95	10,019	3,807
574.00	10,019	4,008
574.05	10,019	4,208
574.10	10,019	4,408
574.15	10,019	4,609
574.20	10,019	4,809
574.25	10,019	5,010
574.30	10,019	5,210
574.35	10,019	5,410
574.40	10,019	5,611
574.45	10,019	5,811
574.50	10,019	6,011
574.55	10,019	6,212
574.60	10,019	6,412
574.65	10,019	6,613
574.70	10,019	6,813
574.75	10,019	7,013
574.80	10,019	7,214
574.85	10,019	7,414
574.90	10,019	7,614
574.95	10,019	7,815
575.00	10,019	8,015
575.05	10,019	8,216
575.10	10,019	8,416
575.15	10,019	8,616
575.20	10,019	8,817
575.25	10,019	9,017
575.30	10,019	9,217
575.35	10,019	9,418
575.40	10,019	9,618
575.45	10,019	9,819
575.50	10,019	10,019
575.55	10,019	10,219
575.60	10,019	10,420
575.65	10,019	10,620
575.70	10,019	10,821
575.75	10,019	11,021
575.80	10,019	11,221
575.85	10,019	11,422
575.90	10,019	11,622
575.95	10,019	11,822
576.00	10,019	**12,023**

Summary for Pond 49P: Basin 7

Inflow Area = 169,079 sf, 50.99% Impervious, Inflow Depth = 2.52" for 10-Year event
Inflow = 8.21 cfs @ 12.21 hrs, Volume= 35,532 cf
Outflow = 2.01 cfs @ 12.80 hrs, Volume= 29,759 cf, Atten= 76%, Lag= 35.4 min
Primary = 2.01 cfs @ 12.80 hrs, Volume= 29,759 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 532.17' @ 12.80 hrs Surf.Area= 16,410 sf Storage= 17,984 cf

Plug-Flow detention time= 309.2 min calculated for 29,744 cf (84% of inflow)
Center-of-Mass det. time= 237.8 min (1,028.1 - 790.2)

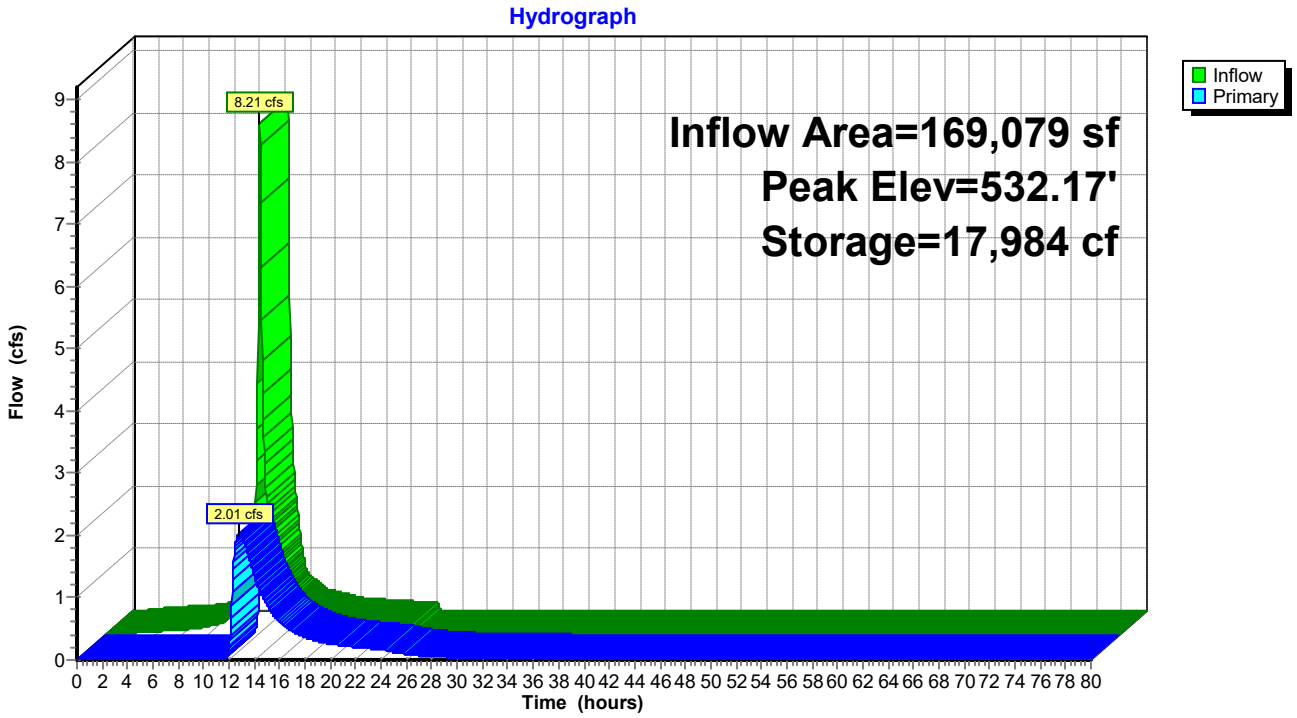
Volume	Invert	Avail.Storage	Storage Description
#1	531.00'	50,966 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
531.00	14,375	0	0
532.00	16,117	15,246	15,246
533.00	17,860	16,989	32,235
534.00	19,602	18,731	50,966

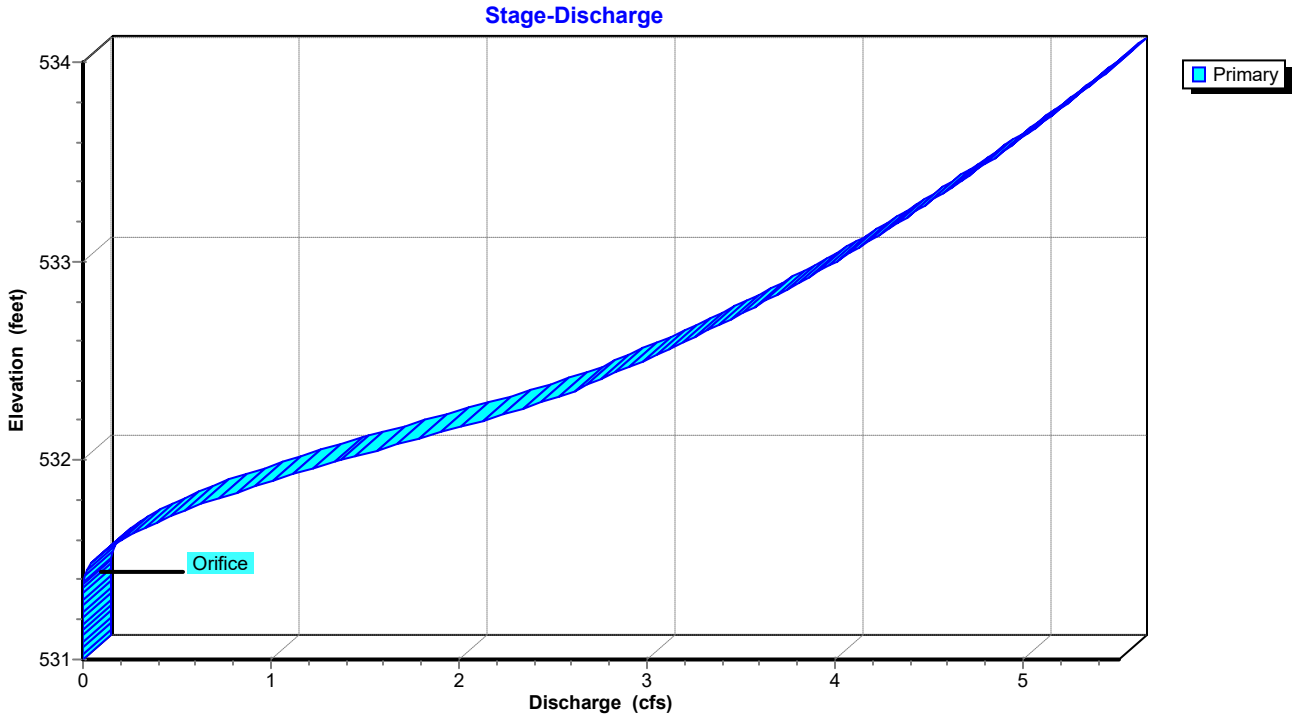
Device	Routing	Invert	Outlet Devices
#1	Primary	531.38'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.01 cfs @ 12.80 hrs HW=532.17' (Free Discharge)
1=Orifice (Orifice Controls 2.01 cfs @ 3.02 fps)

Pond 49P: Basin 7



Pond 49P: Basin 7



Hydrograph for Pond 49P: Basin 7

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	531.00	0.00
2.00	0.03	73	531.01	0.00
4.00	0.07	438	531.03	0.00
6.00	0.09	989	531.07	0.00
8.00	0.14	1,789	531.12	0.00
10.00	0.31	3,271	531.22	0.00
12.00	**3.33**	**9,196**	**531.62**	**0.24**
14.00	**0.58**	**15,128**	**531.99**	**1.34**
16.00	0.32	11,609	531.77	0.61
18.00	0.22	10,153	531.68	0.37
20.00	0.18	9,369	531.63	0.26
22.00	0.16	8,939	531.60	0.20
24.00	0.13	8,627	531.58	0.17
26.00	0.00	7,792	531.53	0.09
28.00	0.00	7,277	531.49	0.06
30.00	0.00	6,954	531.47	0.04
32.00	0.00	6,730	531.46	0.03
34.00	0.00	6,571	531.45	0.02
36.00	0.00	6,446	531.44	0.02
38.00	0.00	6,347	531.43	0.01
40.00	0.00	6,269	531.43	0.01
42.00	0.00	6,207	531.42	0.01
44.00	0.00	6,156	531.42	0.01
46.00	0.00	6,111	531.41	0.01
48.00	0.00	6,070	531.41	0.01
50.00	0.00	6,033	531.41	0.00
52.00	0.00	6,000	531.41	0.00
54.00	0.00	5,970	531.41	0.00
56.00	0.00	5,944	531.40	0.00
58.00	0.00	5,920	531.40	0.00
60.00	0.00	5,898	531.40	0.00
62.00	0.00	5,879	531.40	0.00
64.00	0.00	5,862	531.40	0.00
66.00	0.00	5,846	531.40	0.00
68.00	0.00	5,832	531.40	0.00
70.00	0.00	5,820	531.40	0.00
72.00	0.00	5,808	531.39	0.00
74.00	0.00	5,798	531.39	0.00
76.00	0.00	5,789	531.39	0.00
78.00	0.00	5,781	531.39	0.00
80.00	0.00	5,774	531.39	0.00

Stage-Discharge for Pond 49P: Basin 7

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
531.00	0.00	532.02	1.45	533.04	4.07
531.02	0.00	532.04	1.52	533.06	4.11
531.04	0.00	532.06	1.60	533.08	4.14
531.06	0.00	532.08	1.67	533.10	4.18
531.08	0.00	532.10	1.75	533.12	4.21
531.10	0.00	532.12	1.83	533.14	4.24
531.12	0.00	532.14	1.90	533.16	4.28
531.14	0.00	532.16	1.98	533.18	4.31
531.16	0.00	532.18	2.05	533.20	4.34
531.18	0.00	532.20	2.13	533.22	4.38
531.20	0.00	532.22	2.20	533.24	4.41
531.22	0.00	532.24	2.27	533.26	4.44
531.24	0.00	532.26	2.34	533.28	4.47
531.26	0.00	532.28	2.40	533.30	4.51
531.28	0.00	532.30	2.47	533.32	4.54
531.30	0.00	532.32	2.53	533.34	4.57
531.32	0.00	532.34	2.58	533.36	4.60
531.34	0.00	532.36	2.63	533.38	4.63
531.36	0.00	532.38	2.67	533.40	4.66
531.38	0.00	532.40	2.73	533.42	4.69
531.40	0.00	532.42	2.78	533.44	4.72
531.42	0.01	532.44	2.83	533.46	4.75
531.44	0.02	532.46	2.88	533.48	4.78
531.46	0.03	532.48	2.93	533.50	4.81
531.48	0.04	532.50	2.98	533.52	4.84
531.50	0.06	532.52	3.03	533.54	4.87
531.52	0.09	532.54	3.07	533.56	4.90
531.54	0.11	532.56	3.12	533.58	4.93
531.56	0.14	532.58	3.16	533.60	4.96
531.58	0.17	532.60	3.21	533.62	4.99
531.60	0.20	532.62	3.25	533.64	5.02
531.62	0.24	532.64	3.30	533.66	5.05
531.64	0.28	532.66	3.34	533.68	5.07
531.66	0.32	532.68	3.38	533.70	5.10
531.68	0.37	532.70	3.42	533.72	5.13
531.70	0.42	532.72	3.47	533.74	5.16
531.72	0.47	532.74	3.51	533.76	5.19
531.74	0.52	532.76	3.55	533.78	5.21
531.76	0.57	532.78	3.59	533.80	5.24
531.78	0.63	532.80	3.63	533.82	5.27
531.80	0.69	532.82	3.67	533.84	5.29
531.82	0.75	532.84	3.71	533.86	5.32
531.84	0.81	532.86	3.74	533.88	5.35
531.86	0.88	532.88	3.78	533.90	5.37
531.88	0.95	532.90	3.82	533.92	5.40
531.90	1.01	532.92	3.86	533.94	5.43
531.92	1.08	532.94	3.89	533.96	5.45
531.94	1.15	532.96	3.93	533.98	5.48
531.96	1.22	532.98	3.97	534.00	**5.51**
531.98	1.30	533.00	4.00		
532.00	1.37	533.02	4.04		

Stage-Area-Storage for Pond 49P: Basin 7

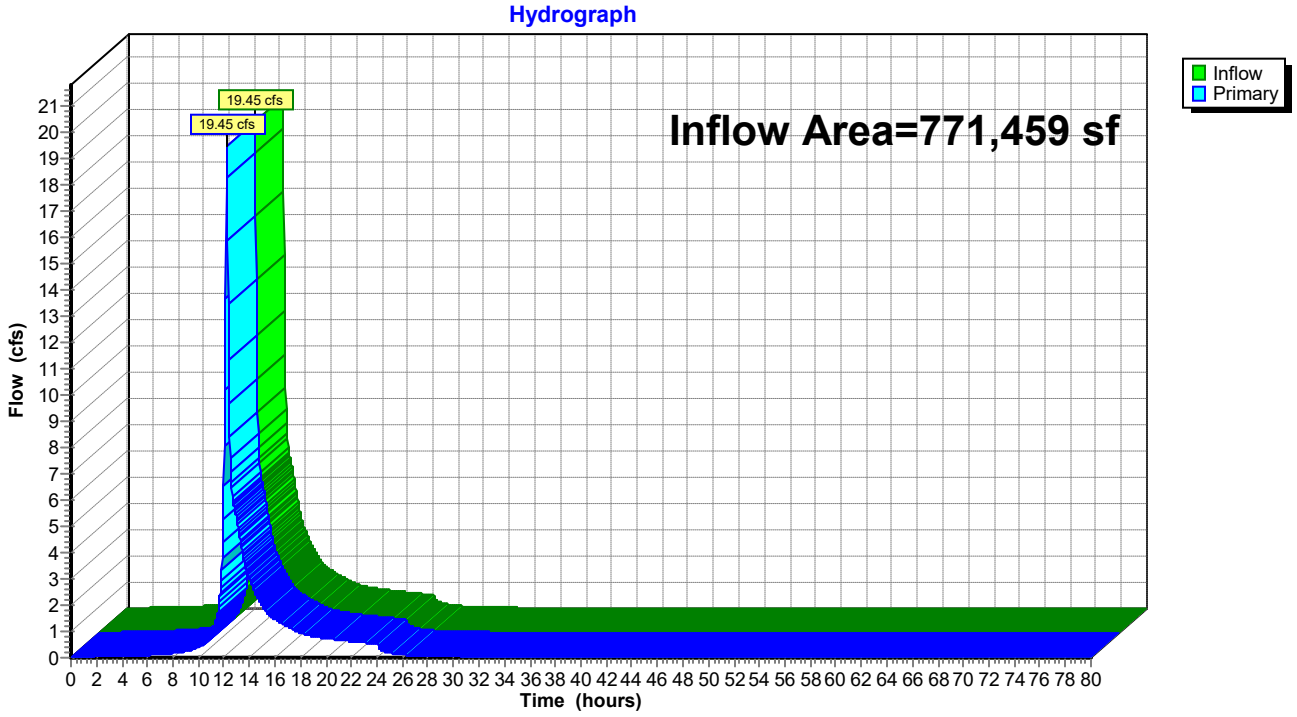
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
531.00	14,375	0
531.05	14,462	721
531.10	14,549	1,446
531.15	14,636	2,176
531.20	14,723	2,910
531.25	14,811	3,648
531.30	14,898	4,391
531.35	14,985	5,138
531.40	15,072	5,889
531.45	15,159	6,645
531.50	15,246	7,405
531.55	15,333	8,170
531.60	15,420	8,939
531.65	15,507	9,712
531.70	15,594	10,489
531.75	15,682	11,271
531.80	15,769	12,057
531.85	15,856	12,848
531.90	15,943	13,643
531.95	16,030	14,442
532.00	16,117	15,246
532.05	16,204	16,054
532.10	16,291	16,866
532.15	16,378	17,683
532.20	16,466	18,504
532.25	16,553	19,330
532.30	16,640	20,160
532.35	16,727	20,994
532.40	16,814	21,832
532.45	16,901	22,675
532.50	16,989	23,522
532.55	17,076	24,374
532.60	17,163	25,230
532.65	17,250	26,090
532.70	17,337	26,955
532.75	17,424	27,824
532.80	17,511	28,697
532.85	17,599	29,575
532.90	17,686	30,457
532.95	17,773	31,344
533.00	17,860	32,235
533.05	17,947	33,130
533.10	18,034	34,029
533.15	18,121	34,933
533.20	18,208	35,841
533.25	18,296	36,754
533.30	18,383	37,671
533.35	18,470	38,592
533.40	18,557	39,518
533.45	18,644	40,448
533.50	18,731	41,382
533.55	18,818	42,321
533.60	18,905	43,264
533.65	18,992	44,211
533.70	19,079	45,163
533.75	19,167	46,119
533.80	19,254	47,080
533.85	19,341	48,045
533.90	19,428	49,014
533.95	19,515	49,988
534.00	**19,602**	**50,966**

Summary for Link 28L: POA 2

Inflow Area = 771,459 sf, 50.89% Impervious, Inflow Depth = 1.61" for 10-Year event
Inflow = 19.45 cfs @ 12.20 hrs, Volume= 103,292 cf
Primary = 19.45 cfs @ 12.20 hrs, Volume= 103,292 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 28L: POA 2



Hydrograph for Link 28L: POA 2

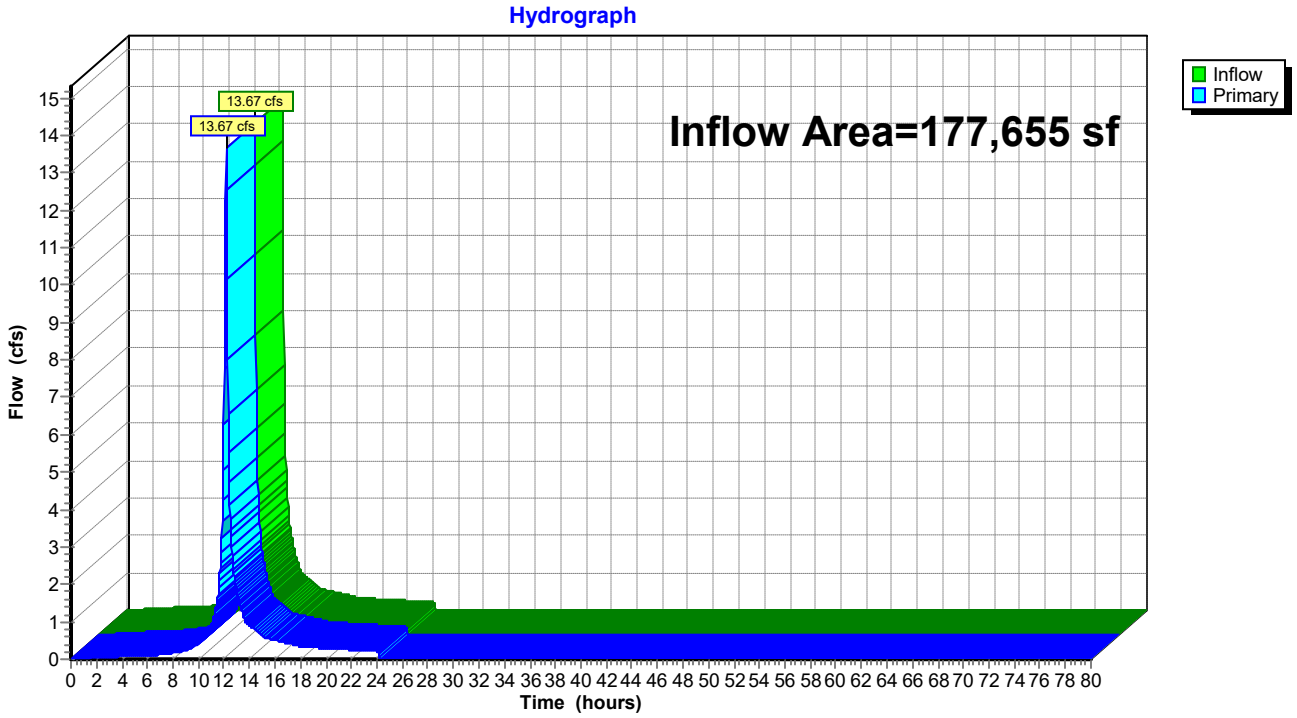
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.01	0.00	0.01
0.80	0.00	0.00	0.00	41.60	0.01	0.00	0.01
1.60	0.03	0.00	0.03	42.40	0.01	0.00	0.01
2.40	0.05	0.00	0.05	43.20	0.01	0.00	0.01
3.20	0.06	0.00	0.06	44.00	0.01	0.00	0.01
4.00	0.07	0.00	0.07	44.80	0.01	0.00	0.01
4.80	0.08	0.00	0.08	45.60	0.01	0.00	0.01
5.60	0.09	0.00	0.09	46.40	0.01	0.00	0.01
6.40	0.11	0.00	0.11	47.20	0.01	0.00	0.01
7.20	0.13	0.00	0.13	48.00	0.01	0.00	0.01
8.00	0.17	0.00	0.17	48.80	0.01	0.00	0.01
8.80	0.23	0.00	0.23	49.60	0.00	0.00	0.00
9.60	0.35	0.00	0.35	50.40	0.00	0.00	0.00
10.40	0.53	0.00	0.53	51.20	0.00	0.00	0.00
11.20	1.13	0.00	1.13	52.00	0.00	0.00	0.00
12.00	**6.50**	0.00	**6.50**	52.80	0.00	0.00	0.00
12.80	**5.72**	0.00	**5.72**	53.60	0.00	0.00	0.00
13.60	3.65	0.00	3.65	54.40	0.00	0.00	0.00
14.40	2.51	0.00	2.51	55.20	0.00	0.00	0.00
15.20	1.82	0.00	1.82	56.00	0.00	0.00	0.00
16.00	1.47	0.00	1.47	56.80	0.00	0.00	0.00
16.80	1.23	0.00	1.23	57.60	0.00	0.00	0.00
17.60	1.04	0.00	1.04	58.40	0.00	0.00	0.00
18.40	0.88	0.00	0.88	59.20	0.00	0.00	0.00
19.20	0.80	0.00	0.80	60.00	0.00	0.00	0.00
20.00	0.74	0.00	0.74	60.80	0.00	0.00	0.00
20.80	0.69	0.00	0.69	61.60	0.00	0.00	0.00
21.60	0.64	0.00	0.64	62.40	0.00	0.00	0.00
22.40	0.60	0.00	0.60	63.20	0.00	0.00	0.00
23.20	0.56	0.00	0.56	64.00	0.00	0.00	0.00
24.00	0.52	0.00	0.52	64.80	0.00	0.00	0.00
24.80	0.21	0.00	0.21	65.60	0.00	0.00	0.00
25.60	0.13	0.00	0.13	66.40	0.00	0.00	0.00
26.40	0.09	0.00	0.09	67.20	0.00	0.00	0.00
27.20	0.07	0.00	0.07	68.00	0.00	0.00	0.00
28.00	0.06	0.00	0.06	68.80	0.00	0.00	0.00
28.80	0.05	0.00	0.05	69.60	0.00	0.00	0.00
29.60	0.04	0.00	0.04	70.40	0.00	0.00	0.00
30.40	0.03	0.00	0.03	71.20	0.00	0.00	0.00
31.20	0.03	0.00	0.03	72.00	0.00	0.00	0.00
32.00	0.03	0.00	0.03	72.80	0.00	0.00	0.00
32.80	0.02	0.00	0.02	73.60	0.00	0.00	0.00
33.60	0.02	0.00	0.02	74.40	0.00	0.00	0.00
34.40	0.02	0.00	0.02	75.20	0.00	0.00	0.00
35.20	0.02	0.00	0.02	76.00	0.00	0.00	0.00
36.00	0.02	0.00	0.02	76.80	0.00	0.00	0.00
36.80	0.01	0.00	0.01	77.60	0.00	0.00	0.00
37.60	0.01	0.00	0.01	78.40	0.00	0.00	0.00
38.40	0.01	0.00	0.01	79.20	0.00	0.00	0.00
39.20	0.01	0.00	0.01	80.00	0.00	0.00	0.00
40.00	0.01	0.00	0.01				

Summary for Link 34L: DA 2 Undetained

Inflow Area = 177,655 sf, 29.56% Impervious, Inflow Depth = 3.45" for 10-Year event
Inflow = 13.67 cfs @ 12.16 hrs, Volume= 51,089 cf
Primary = 13.67 cfs @ 12.16 hrs, Volume= 51,089 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 28L : POA 2

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 34L: DA 2 Undetained



Hydrograph for Link 34L: DA 2 Undetained

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.00	0.00	0.00
0.80	0.00	0.00	0.00	41.60	0.00	0.00	0.00
1.60	0.03	0.00	0.03	42.40	0.00	0.00	0.00
2.40	0.05	0.00	0.05	43.20	0.00	0.00	0.00
3.20	0.06	0.00	0.06	44.00	0.00	0.00	0.00
4.00	0.07	0.00	0.07	44.80	0.00	0.00	0.00
4.80	0.08	0.00	0.08	45.60	0.00	0.00	0.00
5.60	0.09	0.00	0.09	46.40	0.00	0.00	0.00
6.40	0.11	0.00	0.11	47.20	0.00	0.00	0.00
7.20	0.13	0.00	0.13	48.00	0.00	0.00	0.00
8.00	0.17	0.00	0.17	48.80	0.00	0.00	0.00
8.80	0.23	0.00	0.23	49.60	0.00	0.00	0.00
9.60	0.35	0.00	0.35	50.40	0.00	0.00	0.00
10.40	0.53	0.00	0.53	51.20	0.00	0.00	0.00
11.20	1.13	0.00	1.13	52.00	0.00	0.00	0.00
12.00	**6.26**	0.00	**6.26**	52.80	0.00	0.00	0.00
12.80	**2.21**	0.00	**2.21**	53.60	0.00	0.00	0.00
13.60	1.09	0.00	1.09	54.40	0.00	0.00	0.00
14.40	0.80	0.00	0.80	55.20	0.00	0.00	0.00
15.20	0.58	0.00	0.58	56.00	0.00	0.00	0.00
16.00	0.51	0.00	0.51	56.80	0.00	0.00	0.00
16.80	0.44	0.00	0.44	57.60	0.00	0.00	0.00
17.60	0.38	0.00	0.38	58.40	0.00	0.00	0.00
18.40	0.33	0.00	0.33	59.20	0.00	0.00	0.00
19.20	0.31	0.00	0.31	60.00	0.00	0.00	0.00
20.00	0.29	0.00	0.29	60.80	0.00	0.00	0.00
20.80	0.28	0.00	0.28	61.60	0.00	0.00	0.00
21.60	0.26	0.00	0.26	62.40	0.00	0.00	0.00
22.40	0.24	0.00	0.24	63.20	0.00	0.00	0.00
23.20	0.23	0.00	0.23	64.00	0.00	0.00	0.00
24.00	0.21	0.00	0.21	64.80	0.00	0.00	0.00
24.80	0.00	0.00	0.00	65.60	0.00	0.00	0.00
25.60	0.00	0.00	0.00	66.40	0.00	0.00	0.00
26.40	0.00	0.00	0.00	67.20	0.00	0.00	0.00
27.20	0.00	0.00	0.00	68.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	68.80	0.00	0.00	0.00
28.80	0.00	0.00	0.00	69.60	0.00	0.00	0.00
29.60	0.00	0.00	0.00	70.40	0.00	0.00	0.00
30.40	0.00	0.00	0.00	71.20	0.00	0.00	0.00
31.20	0.00	0.00	0.00	72.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	72.80	0.00	0.00	0.00
32.80	0.00	0.00	0.00	73.60	0.00	0.00	0.00
33.60	0.00	0.00	0.00	74.40	0.00	0.00	0.00
34.40	0.00	0.00	0.00	75.20	0.00	0.00	0.00
35.20	0.00	0.00	0.00	76.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	76.80	0.00	0.00	0.00
36.80	0.00	0.00	0.00	77.60	0.00	0.00	0.00
37.60	0.00	0.00	0.00	78.40	0.00	0.00	0.00
38.40	0.00	0.00	0.00	79.20	0.00	0.00	0.00
39.20	0.00	0.00	0.00	80.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00				

Summary for Subcatchment 19S: Basin 3 - Imp

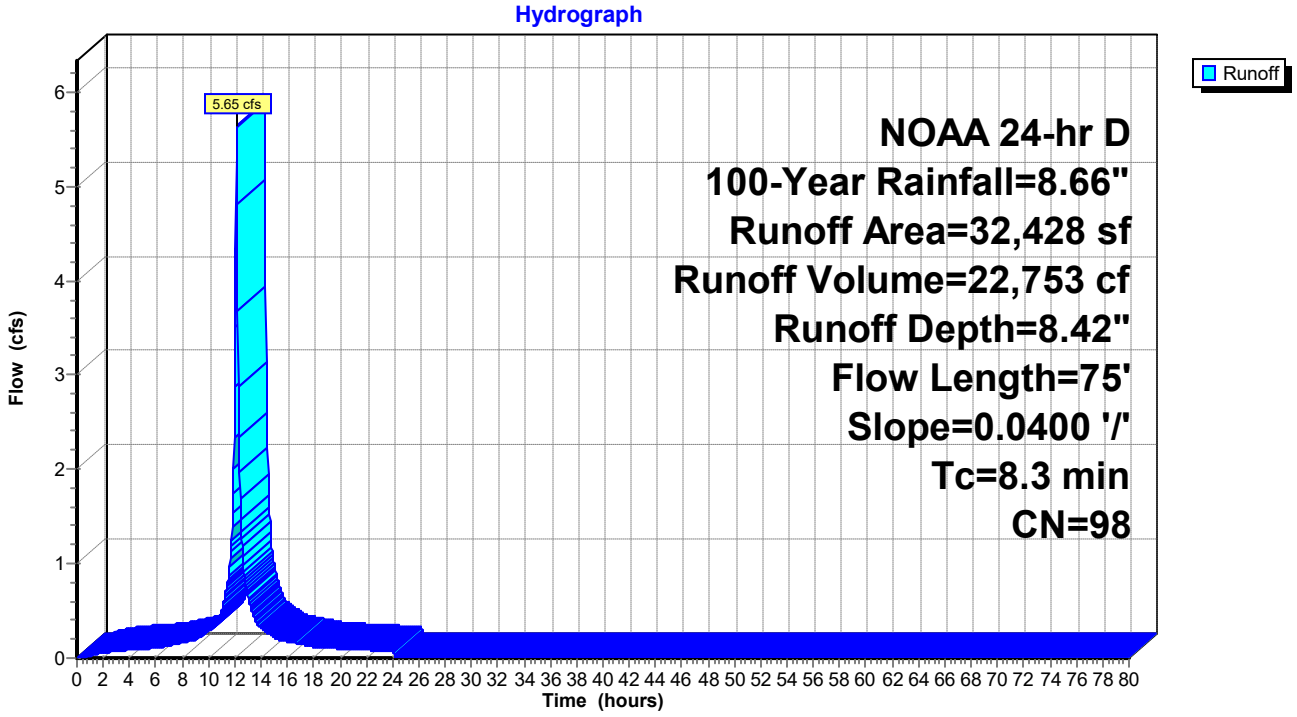
Runoff = 5.65 cfs @ 12.15 hrs, Volume= 22,753 cf, Depth= 8.42"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
18,295	98	Roofs, HSG C
7,163	98	Paved parking, HSG C
32,428	98	Weighted Average
32,428		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 19S: Basin 3 - Imp



Hydrograph for Subcatchment 19S: Basin 3 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.02	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.05	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.06	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.08	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.09	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.10	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.10	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.12	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.14	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.17	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.19	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.25	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.33	51.20	8.66	8.42	0.00
11.20	2.42	2.19	0.62	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**2.88**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**0.80**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.38	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.28	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.20	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.18	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.15	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.13	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.11	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.11	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.10	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.09	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.09	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.08	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.08	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.07	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 20S: Basin 3 - Perv

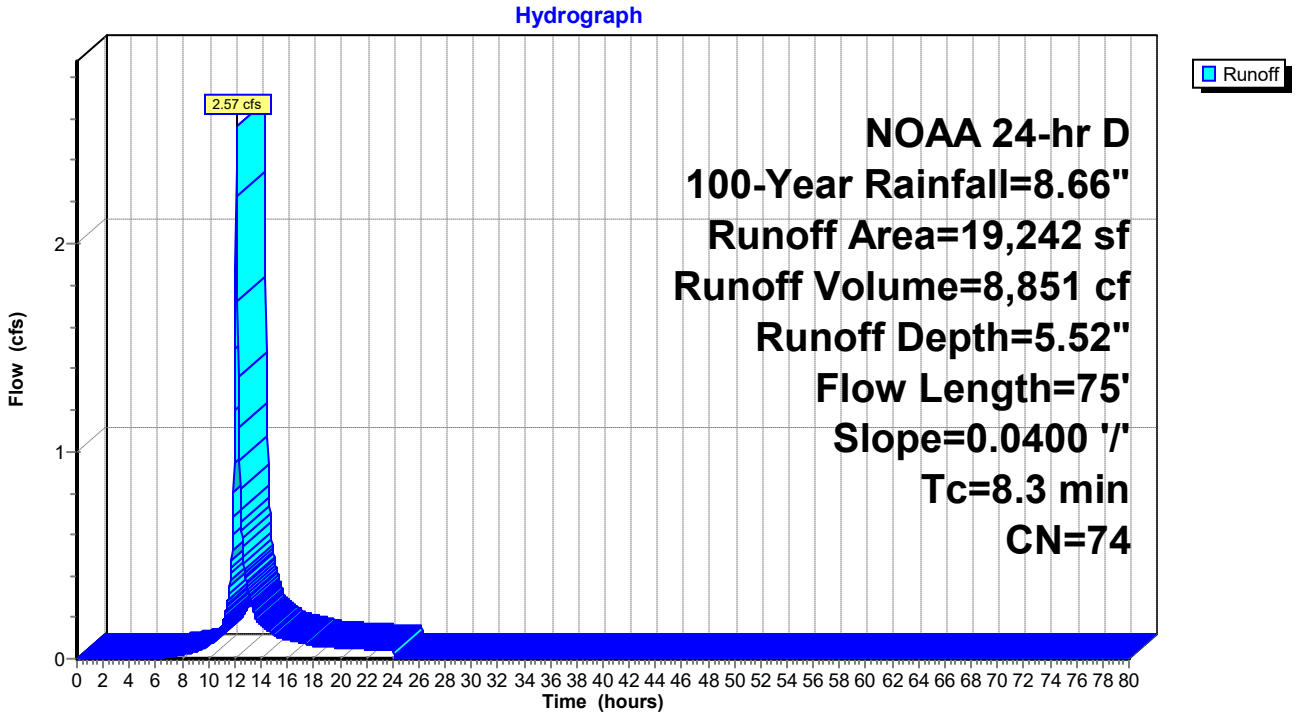
Runoff = 2.57 cfs @ 12.15 hrs, Volume= 8,851 cf, Depth= 5.52"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
19,242	74	>75% Grass cover, Good, HSG C
19,242		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 20S: Basin 3 - Perv



Hydrograph for Subcatchment 20S: Basin 3 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	5.52	0.00
0.80	0.08	0.00	0.00	41.60	8.66	5.52	0.00
1.60	0.16	0.00	0.00	42.40	8.66	5.52	0.00
2.40	0.25	0.00	0.00	43.20	8.66	5.52	0.00
3.20	0.35	0.00	0.00	44.00	8.66	5.52	0.00
4.00	0.45	0.00	0.00	44.80	8.66	5.52	0.00
4.80	0.56	0.00	0.00	45.60	8.66	5.52	0.00
5.60	0.68	0.00	0.00	46.40	8.66	5.52	0.00
6.40	0.80	0.00	0.00	47.20	8.66	5.52	0.00
7.20	0.95	0.02	0.01	48.00	8.66	5.52	0.00
8.00	1.12	0.05	0.02	48.80	8.66	5.52	0.00
8.80	1.32	0.09	0.03	49.60	8.66	5.52	0.00
9.60	1.56	0.17	0.05	50.40	8.66	5.52	0.00
10.40	1.89	0.30	0.09	51.20	8.66	5.52	0.00
11.20	2.42	0.57	0.20	52.00	8.66	5.52	0.00
12.00	4.15	1.71	**1.20**	52.80	8.66	5.52	0.00
12.80	6.24	3.39	**0.40**	53.60	8.66	5.52	0.00
13.60	6.77	3.84	0.20	54.40	8.66	5.52	0.00
14.40	7.10	4.13	0.15	55.20	8.66	5.52	0.00
15.20	7.34	4.34	0.10	56.00	8.66	5.52	0.00
16.00	7.54	4.51	0.09	56.80	8.66	5.52	0.00
16.80	7.71	4.67	0.08	57.60	8.66	5.52	0.00
17.60	7.86	4.80	0.07	58.40	8.66	5.52	0.00
18.40	7.98	4.91	0.06	59.20	8.66	5.52	0.00
19.20	8.10	5.01	0.06	60.00	8.66	5.52	0.00
20.00	8.21	5.11	0.05	60.80	8.66	5.52	0.00
20.80	8.31	5.20	0.05	61.60	8.66	5.52	0.00
21.60	8.41	5.29	0.05	62.40	8.66	5.52	0.00
22.40	8.50	5.37	0.04	63.20	8.66	5.52	0.00
23.20	8.58	5.45	0.04	64.00	8.66	5.52	0.00
24.00	**8.66**	**5.52**	0.04	64.80	8.66	5.52	0.00
24.80	8.66	5.52	0.00	65.60	8.66	5.52	0.00
25.60	8.66	5.52	0.00	66.40	8.66	5.52	0.00
26.40	8.66	5.52	0.00	67.20	8.66	5.52	0.00
27.20	8.66	5.52	0.00	68.00	8.66	5.52	0.00
28.00	8.66	5.52	0.00	68.80	8.66	5.52	0.00
28.80	8.66	5.52	0.00	69.60	8.66	5.52	0.00
29.60	8.66	5.52	0.00	70.40	8.66	5.52	0.00
30.40	8.66	5.52	0.00	71.20	8.66	5.52	0.00
31.20	8.66	5.52	0.00	72.00	8.66	5.52	0.00
32.00	8.66	5.52	0.00	72.80	8.66	5.52	0.00
32.80	8.66	5.52	0.00	73.60	8.66	5.52	0.00
33.60	8.66	5.52	0.00	74.40	8.66	5.52	0.00
34.40	8.66	5.52	0.00	75.20	8.66	5.52	0.00
35.20	8.66	5.52	0.00	76.00	8.66	5.52	0.00
36.00	8.66	5.52	0.00	76.80	8.66	5.52	0.00
36.80	8.66	5.52	0.00	77.60	8.66	5.52	0.00
37.60	8.66	5.52	0.00	78.40	8.66	5.52	0.00
38.40	8.66	5.52	0.00	79.20	8.66	5.52	0.00
39.20	8.66	5.52	0.00	80.00	8.66	5.52	0.00
40.00	8.66	5.52	0.00				

Summary for Subcatchment 21S: Basin 4 - Imp

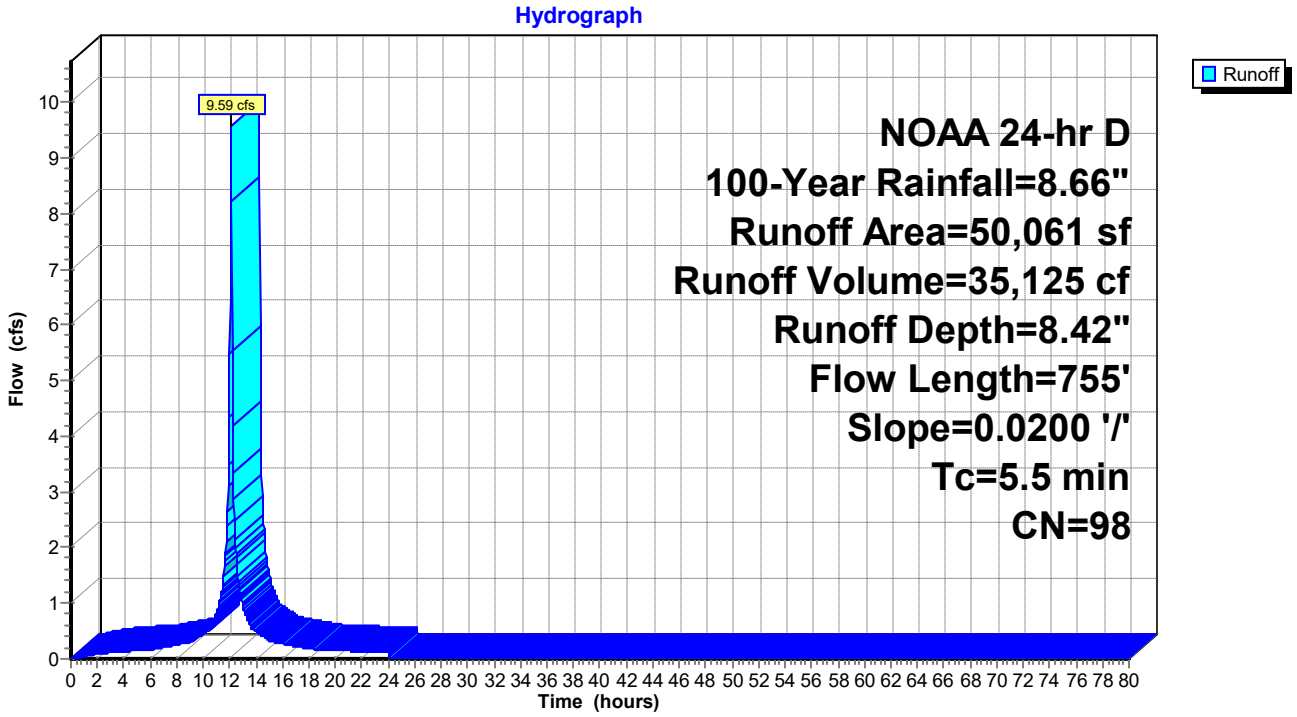
Runoff = 9.59 cfs @ 12.12 hrs, Volume= 35,125 cf, Depth= 8.42"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
43,091	98	Paved parking, HSG C
50,061	98	Weighted Average
50,061		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 21S: Basin 4 - Imp



Hydrograph for Subcatchment 21S: Basin 4 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.03	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.07	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.10	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.12	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.14	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.15	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.16	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.18	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.22	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.26	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.29	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.39	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.52	51.20	8.66	8.42	0.00
11.20	2.42	2.19	1.00	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**5.47**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**1.18**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.57	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.43	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.31	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.27	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.24	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.20	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.17	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.16	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.15	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.15	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.14	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.13	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.12	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.11	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 24S: Basin 4 - Perv

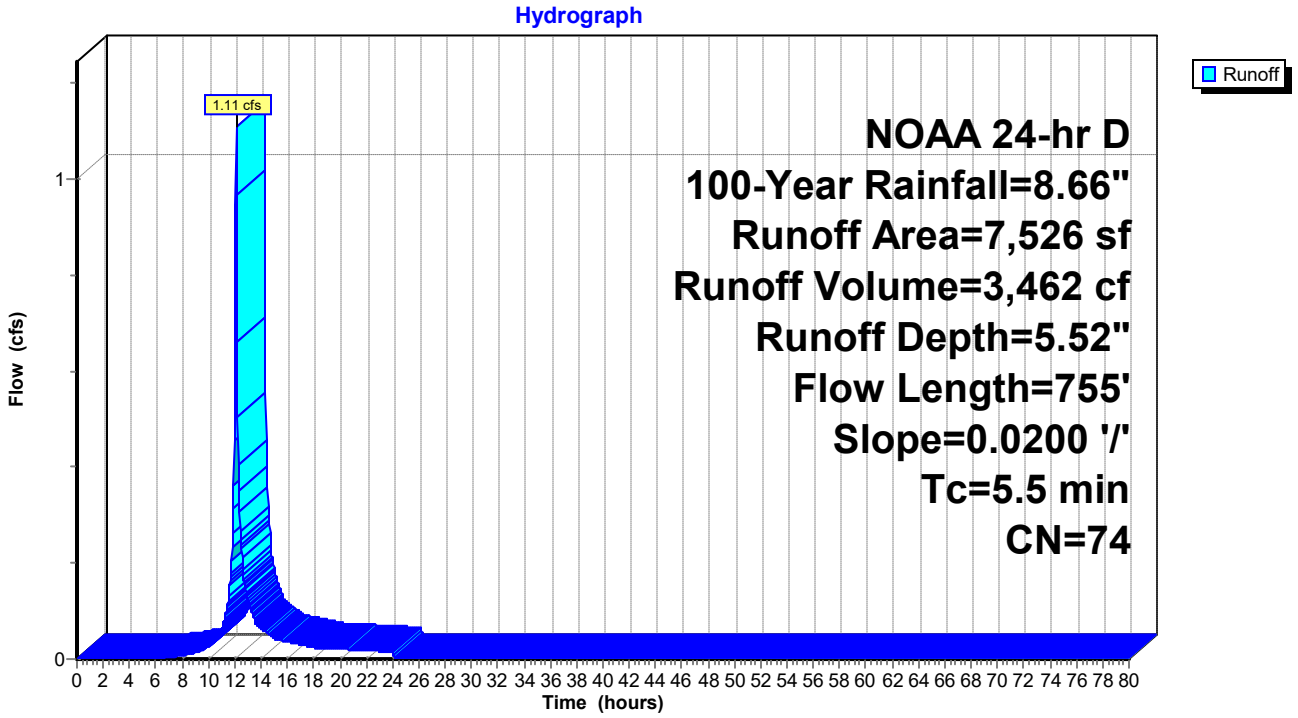
Runoff = 1.11 cfs @ 12.12 hrs, Volume= 3,462 cf, Depth= 5.52"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
7,526	74	>75% Grass cover, Good, HSG C
7,526		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 24S: Basin 4 - Perv



Hydrograph for Subcatchment 24S: Basin 4 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	5.52	0.00
0.80	0.08	0.00	0.00	41.60	8.66	5.52	0.00
1.60	0.16	0.00	0.00	42.40	8.66	5.52	0.00
2.40	0.25	0.00	0.00	43.20	8.66	5.52	0.00
3.20	0.35	0.00	0.00	44.00	8.66	5.52	0.00
4.00	0.45	0.00	0.00	44.80	8.66	5.52	0.00
4.80	0.56	0.00	0.00	45.60	8.66	5.52	0.00
5.60	0.68	0.00	0.00	46.40	8.66	5.52	0.00
6.40	0.80	0.00	0.00	47.20	8.66	5.52	0.00
7.20	0.95	0.02	0.00	48.00	8.66	5.52	0.00
8.00	1.12	0.05	0.01	48.80	8.66	5.52	0.00
8.80	1.32	0.09	0.01	49.60	8.66	5.52	0.00
9.60	1.56	0.17	0.02	50.40	8.66	5.52	0.00
10.40	1.89	0.30	0.03	51.20	8.66	5.52	0.00
11.20	2.42	0.57	0.08	52.00	8.66	5.52	0.00
12.00	4.15	1.71	**0.59**	52.80	8.66	5.52	0.00
12.80	6.24	3.39	**0.15**	53.60	8.66	5.52	0.00
13.60	6.77	3.84	0.07	54.40	8.66	5.52	0.00
14.40	7.10	4.13	0.06	55.20	8.66	5.52	0.00
15.20	7.34	4.34	0.04	56.00	8.66	5.52	0.00
16.00	7.54	4.51	0.04	56.80	8.66	5.52	0.00
16.80	7.71	4.67	0.03	57.60	8.66	5.52	0.00
17.60	7.86	4.80	0.03	58.40	8.66	5.52	0.00
18.40	7.98	4.91	0.02	59.20	8.66	5.52	0.00
19.20	8.10	5.01	0.02	60.00	8.66	5.52	0.00
20.00	8.21	5.11	0.02	60.80	8.66	5.52	0.00
20.80	8.31	5.20	0.02	61.60	8.66	5.52	0.00
21.60	8.41	5.29	0.02	62.40	8.66	5.52	0.00
22.40	8.50	5.37	0.02	63.20	8.66	5.52	0.00
23.20	8.58	5.45	0.02	64.00	8.66	5.52	0.00
24.00	**8.66**	**5.52**	0.02	64.80	8.66	5.52	0.00
24.80	8.66	5.52	0.00	65.60	8.66	5.52	0.00
25.60	8.66	5.52	0.00	66.40	8.66	5.52	0.00
26.40	8.66	5.52	0.00	67.20	8.66	5.52	0.00
27.20	8.66	5.52	0.00	68.00	8.66	5.52	0.00
28.00	8.66	5.52	0.00	68.80	8.66	5.52	0.00
28.80	8.66	5.52	0.00	69.60	8.66	5.52	0.00
29.60	8.66	5.52	0.00	70.40	8.66	5.52	0.00
30.40	8.66	5.52	0.00	71.20	8.66	5.52	0.00
31.20	8.66	5.52	0.00	72.00	8.66	5.52	0.00
32.00	8.66	5.52	0.00	72.80	8.66	5.52	0.00
32.80	8.66	5.52	0.00	73.60	8.66	5.52	0.00
33.60	8.66	5.52	0.00	74.40	8.66	5.52	0.00
34.40	8.66	5.52	0.00	75.20	8.66	5.52	0.00
35.20	8.66	5.52	0.00	76.00	8.66	5.52	0.00
36.00	8.66	5.52	0.00	76.80	8.66	5.52	0.00
36.80	8.66	5.52	0.00	77.60	8.66	5.52	0.00
37.60	8.66	5.52	0.00	78.40	8.66	5.52	0.00
38.40	8.66	5.52	0.00	79.20	8.66	5.52	0.00
39.20	8.66	5.52	0.00	80.00	8.66	5.52	0.00
40.00	8.66	5.52	0.00				

Summary for Subcatchment 25S: Basin 2 - Perv

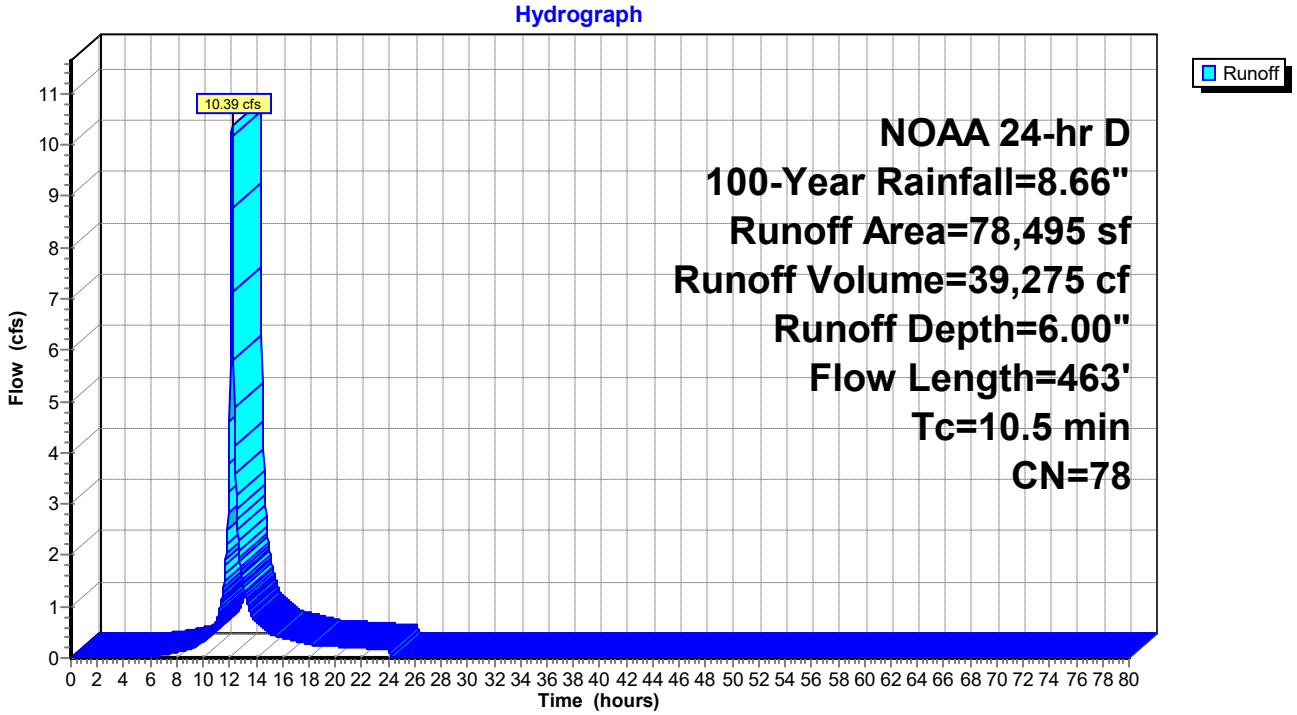
Runoff = 10.39 cfs @ 12.18 hrs, Volume= 39,275 cf, Depth= 6.00"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
47,097	80	>75% Grass cover, Good, HSG D
31,398	74	>75% Grass cover, Good, HSG C
78,495	78	Weighted Average
78,495		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 25S: Basin 2 - Perv



Hydrograph for Subcatchment 25S: Basin 2 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	6.00	0.00
0.80	0.08	0.00	0.00	41.60	8.66	6.00	0.00
1.60	0.16	0.00	0.00	42.40	8.66	6.00	0.00
2.40	0.25	0.00	0.00	43.20	8.66	6.00	0.00
3.20	0.35	0.00	0.00	44.00	8.66	6.00	0.00
4.00	0.45	0.00	0.00	44.80	8.66	6.00	0.00
4.80	0.56	0.00	0.00	45.60	8.66	6.00	0.00
5.60	0.68	0.00	0.02	46.40	8.66	6.00	0.00
6.40	0.80	0.02	0.04	47.20	8.66	6.00	0.00
7.20	0.95	0.05	0.07	48.00	8.66	6.00	0.00
8.00	1.12	0.09	0.12	48.80	8.66	6.00	0.00
8.80	1.32	0.16	0.17	49.60	8.66	6.00	0.00
9.60	1.56	0.26	0.27	50.40	8.66	6.00	0.00
10.40	1.89	0.43	0.42	51.20	8.66	6.00	0.00
11.20	2.42	0.74	0.90	52.00	8.66	6.00	0.00
12.00	4.15	2.01	**4.61**	52.80	8.66	6.00	0.00
12.80	6.24	3.79	**1.78**	53.60	8.66	6.00	0.00
13.60	6.77	4.26	0.87	54.40	8.66	6.00	0.00
14.40	7.10	4.56	0.63	55.20	8.66	6.00	0.00
15.20	7.34	4.78	0.45	56.00	8.66	6.00	0.00
16.00	7.54	4.96	0.39	56.80	8.66	6.00	0.00
16.80	7.71	5.12	0.34	57.60	8.66	6.00	0.00
17.60	7.86	5.26	0.29	58.40	8.66	6.00	0.00
18.40	7.98	5.37	0.25	59.20	8.66	6.00	0.00
19.20	8.10	5.48	0.24	60.00	8.66	6.00	0.00
20.00	8.21	5.58	0.23	60.80	8.66	6.00	0.00
20.80	8.31	5.68	0.21	61.60	8.66	6.00	0.00
21.60	8.41	5.77	0.20	62.40	8.66	6.00	0.00
22.40	8.50	5.85	0.19	63.20	8.66	6.00	0.00
23.20	8.58	5.93	0.18	64.00	8.66	6.00	0.00
24.00	**8.66**	**6.00**	0.16	64.80	8.66	6.00	0.00
24.80	8.66	6.00	0.00	65.60	8.66	6.00	0.00
25.60	8.66	6.00	0.00	66.40	8.66	6.00	0.00
26.40	8.66	6.00	0.00	67.20	8.66	6.00	0.00
27.20	8.66	6.00	0.00	68.00	8.66	6.00	0.00
28.00	8.66	6.00	0.00	68.80	8.66	6.00	0.00
28.80	8.66	6.00	0.00	69.60	8.66	6.00	0.00
29.60	8.66	6.00	0.00	70.40	8.66	6.00	0.00
30.40	8.66	6.00	0.00	71.20	8.66	6.00	0.00
31.20	8.66	6.00	0.00	72.00	8.66	6.00	0.00
32.00	8.66	6.00	0.00	72.80	8.66	6.00	0.00
32.80	8.66	6.00	0.00	73.60	8.66	6.00	0.00
33.60	8.66	6.00	0.00	74.40	8.66	6.00	0.00
34.40	8.66	6.00	0.00	75.20	8.66	6.00	0.00
35.20	8.66	6.00	0.00	76.00	8.66	6.00	0.00
36.00	8.66	6.00	0.00	76.80	8.66	6.00	0.00
36.80	8.66	6.00	0.00	77.60	8.66	6.00	0.00
37.60	8.66	6.00	0.00	78.40	8.66	6.00	0.00
38.40	8.66	6.00	0.00	79.20	8.66	6.00	0.00
39.20	8.66	6.00	0.00	80.00	8.66	6.00	0.00
40.00	8.66	6.00	0.00				

Summary for Subcatchment 28S: Basin 2 - Imp

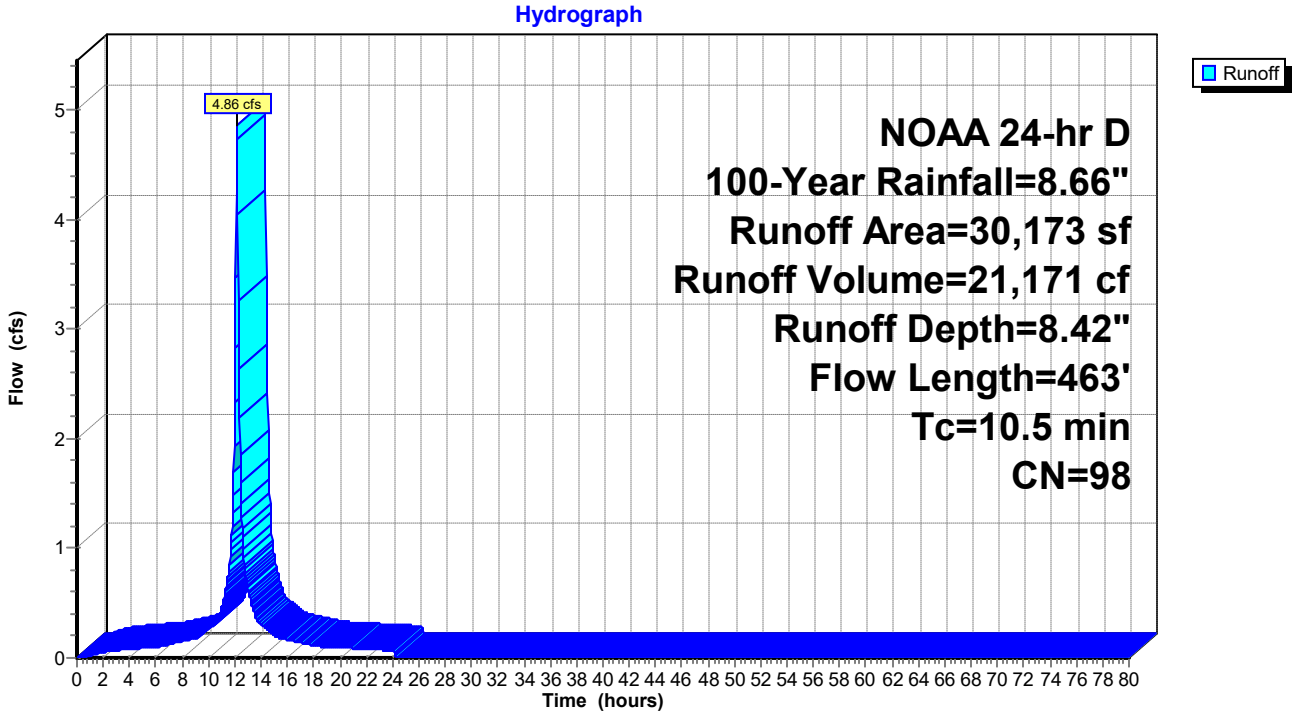
Runoff = 4.86 cfs @ 12.17 hrs, Volume= 21,171 cf, Depth= 8.42"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
28,866	98	Paved parking, HSG C
1,307	98	Paved parking, HSG D
30,173	98	Weighted Average
30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 28S: Basin 2 - Imp



Hydrograph for Subcatchment 28S: Basin 2 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.01	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.04	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.06	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.07	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.08	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.09	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.10	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.11	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.13	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.15	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.17	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.23	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.31	51.20	8.66	8.42	0.00
11.20	2.42	2.19	0.56	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**2.33**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**0.77**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.37	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.26	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.19	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.17	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.14	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.12	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.10	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.10	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.09	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.09	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.08	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.08	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.07	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.07	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 29S: Basin 8 - Imp

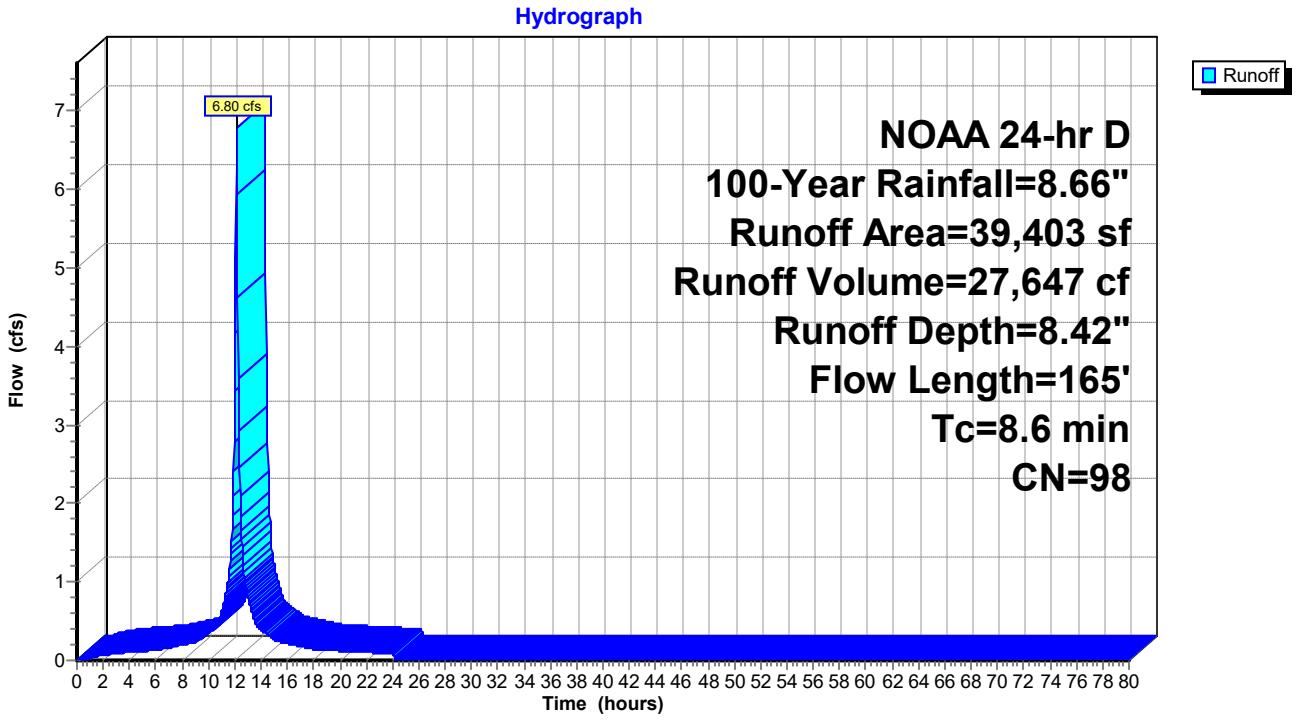
Runoff = 6.80 cfs @ 12.15 hrs, Volume= 27,647 cf, Depth= 8.42"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
24,632	98	Paved parking, HSG C
14,771	98	Paved parking, HSG D
39,403	98	Weighted Average
39,403		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 29S: Basin 8 - Imp



Hydrograph for Subcatchment 29S: Basin 8 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.02	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.06	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.08	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.09	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.11	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.12	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.13	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.14	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.17	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.20	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.23	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.30	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.40	51.20	8.66	8.42	0.00
11.20	2.42	2.19	0.75	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**3.43**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**0.97**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.47	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.34	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.24	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.21	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.19	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.16	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.14	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.13	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.12	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.12	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.11	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.10	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.09	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.09	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 30S: Basin 8 - Perv

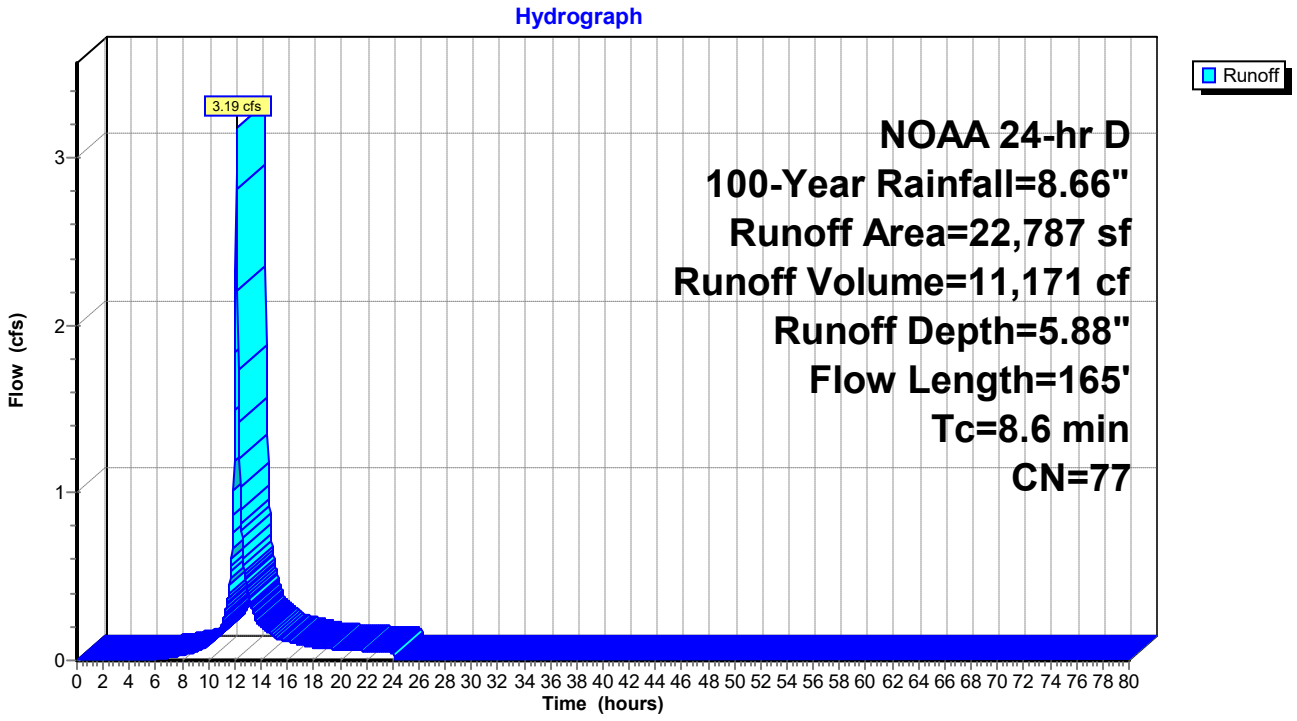
Runoff = 3.19 cfs @ 12.16 hrs, Volume= 11,171 cf, Depth= 5.88"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
11,542	80	>75% Grass cover, Good, HSG D
11,245	74	>75% Grass cover, Good, HSG C
22,787	77	Weighted Average
22,787		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 30S: Basin 8 - Perv



Hydrograph for Subcatchment 30S: Basin 8 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	5.88	0.00
0.80	0.08	0.00	0.00	41.60	8.66	5.88	0.00
1.60	0.16	0.00	0.00	42.40	8.66	5.88	0.00
2.40	0.25	0.00	0.00	43.20	8.66	5.88	0.00
3.20	0.35	0.00	0.00	44.00	8.66	5.88	0.00
4.00	0.45	0.00	0.00	44.80	8.66	5.88	0.00
4.80	0.56	0.00	0.00	45.60	8.66	5.88	0.00
5.60	0.68	0.00	0.00	46.40	8.66	5.88	0.00
6.40	0.80	0.01	0.01	47.20	8.66	5.88	0.00
7.20	0.95	0.04	0.02	48.00	8.66	5.88	0.00
8.00	1.12	0.08	0.03	48.80	8.66	5.88	0.00
8.80	1.32	0.14	0.05	49.60	8.66	5.88	0.00
9.60	1.56	0.24	0.07	50.40	8.66	5.88	0.00
10.40	1.89	0.39	0.12	51.20	8.66	5.88	0.00
11.20	2.42	0.69	0.26	52.00	8.66	5.88	0.00
12.00	4.15	1.93	**1.49**	52.80	8.66	5.88	0.00
12.80	6.24	3.69	**0.49**	53.60	8.66	5.88	0.00
13.60	6.77	4.16	0.24	54.40	8.66	5.88	0.00
14.40	7.10	4.45	0.18	55.20	8.66	5.88	0.00
15.20	7.34	4.67	0.13	56.00	8.66	5.88	0.00
16.00	7.54	4.85	0.11	56.80	8.66	5.88	0.00
16.80	7.71	5.01	0.10	57.60	8.66	5.88	0.00
17.60	7.86	5.14	0.08	58.40	8.66	5.88	0.00
18.40	7.98	5.26	0.07	59.20	8.66	5.88	0.00
19.20	8.10	5.36	0.07	60.00	8.66	5.88	0.00
20.00	8.21	5.46	0.07	60.80	8.66	5.88	0.00
20.80	8.31	5.56	0.06	61.60	8.66	5.88	0.00
21.60	8.41	5.65	0.06	62.40	8.66	5.88	0.00
22.40	8.50	5.73	0.05	63.20	8.66	5.88	0.00
23.20	8.58	5.81	0.05	64.00	8.66	5.88	0.00
24.00	**8.66**	**5.88**	0.05	64.80	8.66	5.88	0.00
24.80	8.66	5.88	0.00	65.60	8.66	5.88	0.00
25.60	8.66	5.88	0.00	66.40	8.66	5.88	0.00
26.40	8.66	5.88	0.00	67.20	8.66	5.88	0.00
27.20	8.66	5.88	0.00	68.00	8.66	5.88	0.00
28.00	8.66	5.88	0.00	68.80	8.66	5.88	0.00
28.80	8.66	5.88	0.00	69.60	8.66	5.88	0.00
29.60	8.66	5.88	0.00	70.40	8.66	5.88	0.00
30.40	8.66	5.88	0.00	71.20	8.66	5.88	0.00
31.20	8.66	5.88	0.00	72.00	8.66	5.88	0.00
32.00	8.66	5.88	0.00	72.80	8.66	5.88	0.00
32.80	8.66	5.88	0.00	73.60	8.66	5.88	0.00
33.60	8.66	5.88	0.00	74.40	8.66	5.88	0.00
34.40	8.66	5.88	0.00	75.20	8.66	5.88	0.00
35.20	8.66	5.88	0.00	76.00	8.66	5.88	0.00
36.00	8.66	5.88	0.00	76.80	8.66	5.88	0.00
36.80	8.66	5.88	0.00	77.60	8.66	5.88	0.00
37.60	8.66	5.88	0.00	78.40	8.66	5.88	0.00
38.40	8.66	5.88	0.00	79.20	8.66	5.88	0.00
39.20	8.66	5.88	0.00	80.00	8.66	5.88	0.00
40.00	8.66	5.88	0.00				

Summary for Subcatchment 31S: Basin 7 - Imp

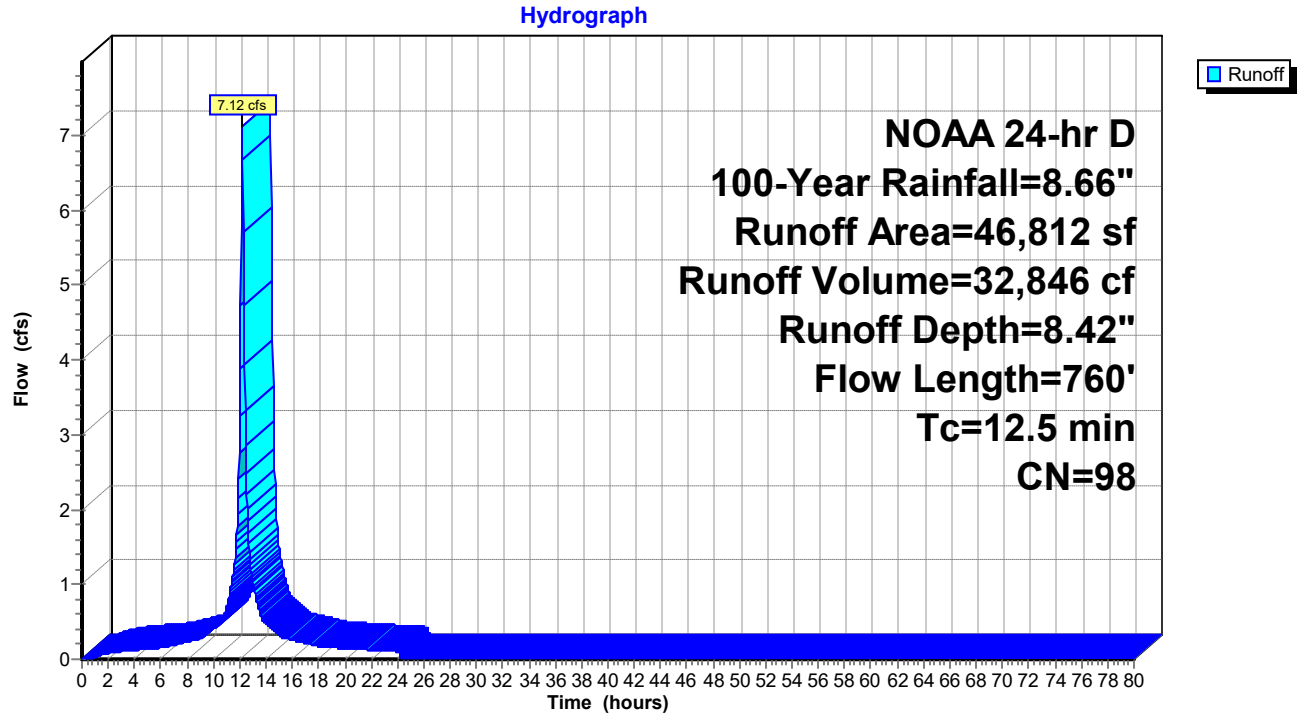
Runoff = 7.12 cfs @ 12.20 hrs, Volume= 32,846 cf, Depth= 8.42"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
15,723	98	Paved parking, HSG D
31,089	98	Paved parking, HSG C
46,812	98	Weighted Average
46,812		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 31S: Basin 7 - Imp



Hydrograph for Subcatchment 31S: Basin 7 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.02	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.06	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.09	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.11	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.13	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.14	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.15	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.17	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.20	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.24	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.27	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.35	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.47	51.20	8.66	8.42	0.00
11.20	2.42	2.19	0.84	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**3.24**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**1.25**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.59	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.41	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.30	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.26	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.22	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.19	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.16	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.15	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.15	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.14	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.13	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.12	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.11	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.10	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 32S: Basin 7 - Perv

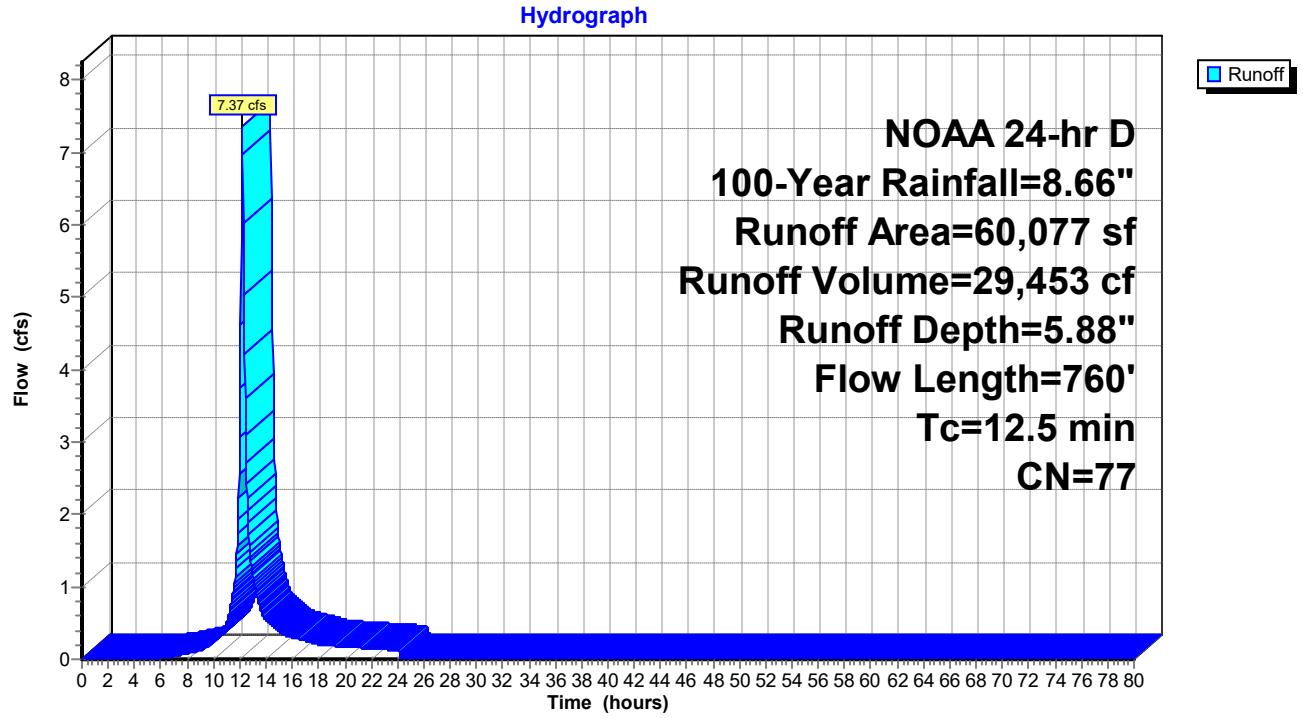
Runoff = 7.37 cfs @ 12.20 hrs, Volume= 29,453 cf, Depth= 5.88"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
25,517	80	>75% Grass cover, Good, HSG D
34,560	74	>75% Grass cover, Good, HSG C
60,077	77	Weighted Average
60,077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 32S: Basin 7 - Perv



Hydrograph for Subcatchment 32S: Basin 7 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	5.88	0.00
0.80	0.08	0.00	0.00	41.60	8.66	5.88	0.00
1.60	0.16	0.00	0.00	42.40	8.66	5.88	0.00
2.40	0.25	0.00	0.00	43.20	8.66	5.88	0.00
3.20	0.35	0.00	0.00	44.00	8.66	5.88	0.00
4.00	0.45	0.00	0.00	44.80	8.66	5.88	0.00
4.80	0.56	0.00	0.00	45.60	8.66	5.88	0.00
5.60	0.68	0.00	0.01	46.40	8.66	5.88	0.00
6.40	0.80	0.01	0.02	47.20	8.66	5.88	0.00
7.20	0.95	0.04	0.05	48.00	8.66	5.88	0.00
8.00	1.12	0.08	0.08	48.80	8.66	5.88	0.00
8.80	1.32	0.14	0.12	49.60	8.66	5.88	0.00
9.60	1.56	0.24	0.19	50.40	8.66	5.88	0.00
10.40	1.89	0.39	0.30	51.20	8.66	5.88	0.00
11.20	2.42	0.69	0.64	52.00	8.66	5.88	0.00
12.00	4.15	1.93	**3.07**	52.80	8.66	5.88	0.00
12.80	6.24	3.69	**1.41**	53.60	8.66	5.88	0.00
13.60	6.77	4.16	0.68	54.40	8.66	5.88	0.00
14.40	7.10	4.45	0.48	55.20	8.66	5.88	0.00
15.20	7.34	4.67	0.35	56.00	8.66	5.88	0.00
16.00	7.54	4.85	0.30	56.80	8.66	5.88	0.00
16.80	7.71	5.01	0.26	57.60	8.66	5.88	0.00
17.60	7.86	5.14	0.22	58.40	8.66	5.88	0.00
18.40	7.98	5.26	0.19	59.20	8.66	5.88	0.00
19.20	8.10	5.36	0.18	60.00	8.66	5.88	0.00
20.00	8.21	5.46	0.17	60.80	8.66	5.88	0.00
20.80	8.31	5.56	0.16	61.60	8.66	5.88	0.00
21.60	8.41	5.65	0.15	62.40	8.66	5.88	0.00
22.40	8.50	5.73	0.14	63.20	8.66	5.88	0.00
23.20	8.58	5.81	0.13	64.00	8.66	5.88	0.00
24.00	**8.66**	**5.88**	0.12	64.80	8.66	5.88	0.00
24.80	8.66	5.88	0.00	65.60	8.66	5.88	0.00
25.60	8.66	5.88	0.00	66.40	8.66	5.88	0.00
26.40	8.66	5.88	0.00	67.20	8.66	5.88	0.00
27.20	8.66	5.88	0.00	68.00	8.66	5.88	0.00
28.00	8.66	5.88	0.00	68.80	8.66	5.88	0.00
28.80	8.66	5.88	0.00	69.60	8.66	5.88	0.00
29.60	8.66	5.88	0.00	70.40	8.66	5.88	0.00
30.40	8.66	5.88	0.00	71.20	8.66	5.88	0.00
31.20	8.66	5.88	0.00	72.00	8.66	5.88	0.00
32.00	8.66	5.88	0.00	72.80	8.66	5.88	0.00
32.80	8.66	5.88	0.00	73.60	8.66	5.88	0.00
33.60	8.66	5.88	0.00	74.40	8.66	5.88	0.00
34.40	8.66	5.88	0.00	75.20	8.66	5.88	0.00
35.20	8.66	5.88	0.00	76.00	8.66	5.88	0.00
36.00	8.66	5.88	0.00	76.80	8.66	5.88	0.00
36.80	8.66	5.88	0.00	77.60	8.66	5.88	0.00
37.60	8.66	5.88	0.00	78.40	8.66	5.88	0.00
38.40	8.66	5.88	0.00	79.20	8.66	5.88	0.00
39.20	8.66	5.88	0.00	80.00	8.66	5.88	0.00
40.00	8.66	5.88	0.00				

Summary for Subcatchment 35S: DA 2 Und - Imp

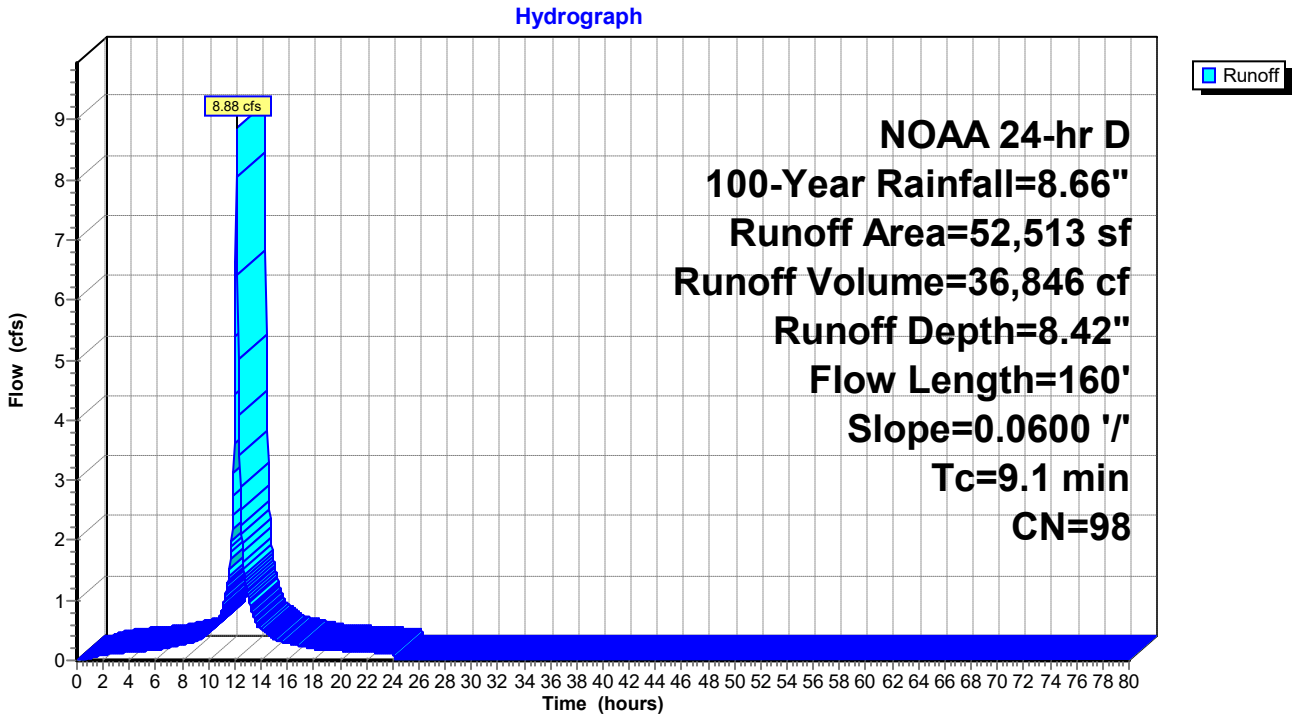
Runoff = 8.88 cfs @ 12.16 hrs, Volume= 36,846 cf, Depth= 8.42"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
19,504	98	Paved parking, HSG C
33,009	98	Paved parking, HSG D
52,513	98	Weighted Average
52,513		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 35S: DA 2 Und - Imp



Hydrograph for Subcatchment 35S: DA 2 Und - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.02	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.07	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.10	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.13	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.14	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.15	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.17	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.19	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.23	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.27	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.31	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.40	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.54	51.20	8.66	8.42	0.00
11.20	2.42	2.19	0.99	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**4.42**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**1.31**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.63	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.46	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.33	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.29	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.25	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.21	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.18	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.17	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.16	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.15	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.14	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.13	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.13	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.12	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 36S: DA 2 Und - Perv

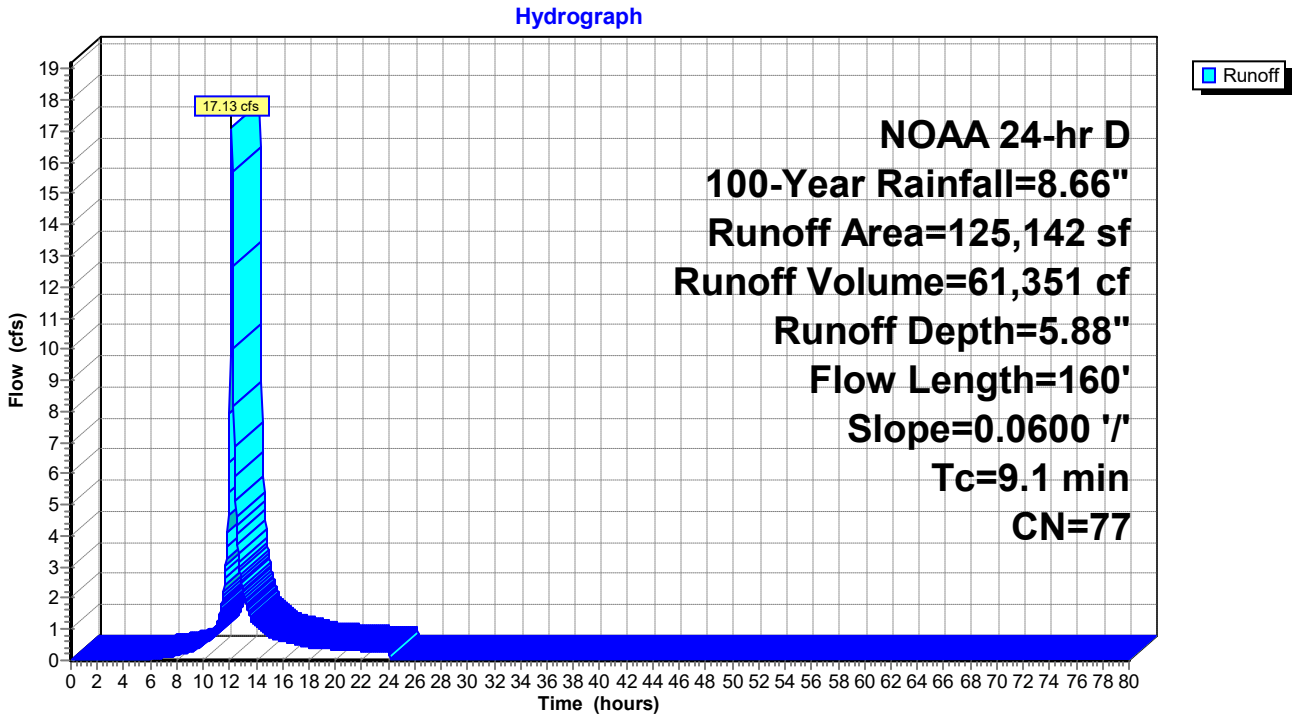
Runoff = 17.13 cfs @ 12.16 hrs, Volume= 61,351 cf, Depth= 5.88"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
57,417	80	>75% Grass cover, Good, HSG D
67,725	74	>75% Grass cover, Good, HSG C
125,142	77	Weighted Average
125,142		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 36S: DA 2 Und - Perv



Hydrograph for Subcatchment 36S: DA 2 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	5.88	0.00
0.80	0.08	0.00	0.00	41.60	8.66	5.88	0.00
1.60	0.16	0.00	0.00	42.40	8.66	5.88	0.00
2.40	0.25	0.00	0.00	43.20	8.66	5.88	0.00
3.20	0.35	0.00	0.00	44.00	8.66	5.88	0.00
4.00	0.45	0.00	0.00	44.80	8.66	5.88	0.00
4.80	0.56	0.00	0.00	45.60	8.66	5.88	0.00
5.60	0.68	0.00	0.02	46.40	8.66	5.88	0.00
6.40	0.80	0.01	0.05	47.20	8.66	5.88	0.00
7.20	0.95	0.04	0.11	48.00	8.66	5.88	0.00
8.00	1.12	0.08	0.17	48.80	8.66	5.88	0.00
8.80	1.32	0.14	0.25	49.60	8.66	5.88	0.00
9.60	1.56	0.24	0.41	50.40	8.66	5.88	0.00
10.40	1.89	0.39	0.65	51.20	8.66	5.88	0.00
11.20	2.42	0.69	1.42	52.00	8.66	5.88	0.00
12.00	4.15	1.93	**7.91**	52.80	8.66	5.88	0.00
12.80	6.24	3.69	**2.73**	53.60	8.66	5.88	0.00
13.60	6.77	4.16	1.34	54.40	8.66	5.88	0.00
14.40	7.10	4.45	0.98	55.20	8.66	5.88	0.00
15.20	7.34	4.67	0.71	56.00	8.66	5.88	0.00
16.00	7.54	4.85	0.62	56.80	8.66	5.88	0.00
16.80	7.71	5.01	0.54	57.60	8.66	5.88	0.00
17.60	7.86	5.14	0.46	58.40	8.66	5.88	0.00
18.40	7.98	5.26	0.40	59.20	8.66	5.88	0.00
19.20	8.10	5.36	0.38	60.00	8.66	5.88	0.00
20.00	8.21	5.46	0.36	60.80	8.66	5.88	0.00
20.80	8.31	5.56	0.34	61.60	8.66	5.88	0.00
21.60	8.41	5.65	0.32	62.40	8.66	5.88	0.00
22.40	8.50	5.73	0.30	63.20	8.66	5.88	0.00
23.20	8.58	5.81	0.28	64.00	8.66	5.88	0.00
24.00	**8.66**	**5.88**	0.26	64.80	8.66	5.88	0.00
24.80	8.66	5.88	0.00	65.60	8.66	5.88	0.00
25.60	8.66	5.88	0.00	66.40	8.66	5.88	0.00
26.40	8.66	5.88	0.00	67.20	8.66	5.88	0.00
27.20	8.66	5.88	0.00	68.00	8.66	5.88	0.00
28.00	8.66	5.88	0.00	68.80	8.66	5.88	0.00
28.80	8.66	5.88	0.00	69.60	8.66	5.88	0.00
29.60	8.66	5.88	0.00	70.40	8.66	5.88	0.00
30.40	8.66	5.88	0.00	71.20	8.66	5.88	0.00
31.20	8.66	5.88	0.00	72.00	8.66	5.88	0.00
32.00	8.66	5.88	0.00	72.80	8.66	5.88	0.00
32.80	8.66	5.88	0.00	73.60	8.66	5.88	0.00
33.60	8.66	5.88	0.00	74.40	8.66	5.88	0.00
34.40	8.66	5.88	0.00	75.20	8.66	5.88	0.00
35.20	8.66	5.88	0.00	76.00	8.66	5.88	0.00
36.00	8.66	5.88	0.00	76.80	8.66	5.88	0.00
36.80	8.66	5.88	0.00	77.60	8.66	5.88	0.00
37.60	8.66	5.88	0.00	78.40	8.66	5.88	0.00
38.40	8.66	5.88	0.00	79.20	8.66	5.88	0.00
39.20	8.66	5.88	0.00	80.00	8.66	5.88	0.00
40.00	8.66	5.88	0.00				

Summary for Subcatchment 45S: Basin 11 - Imp

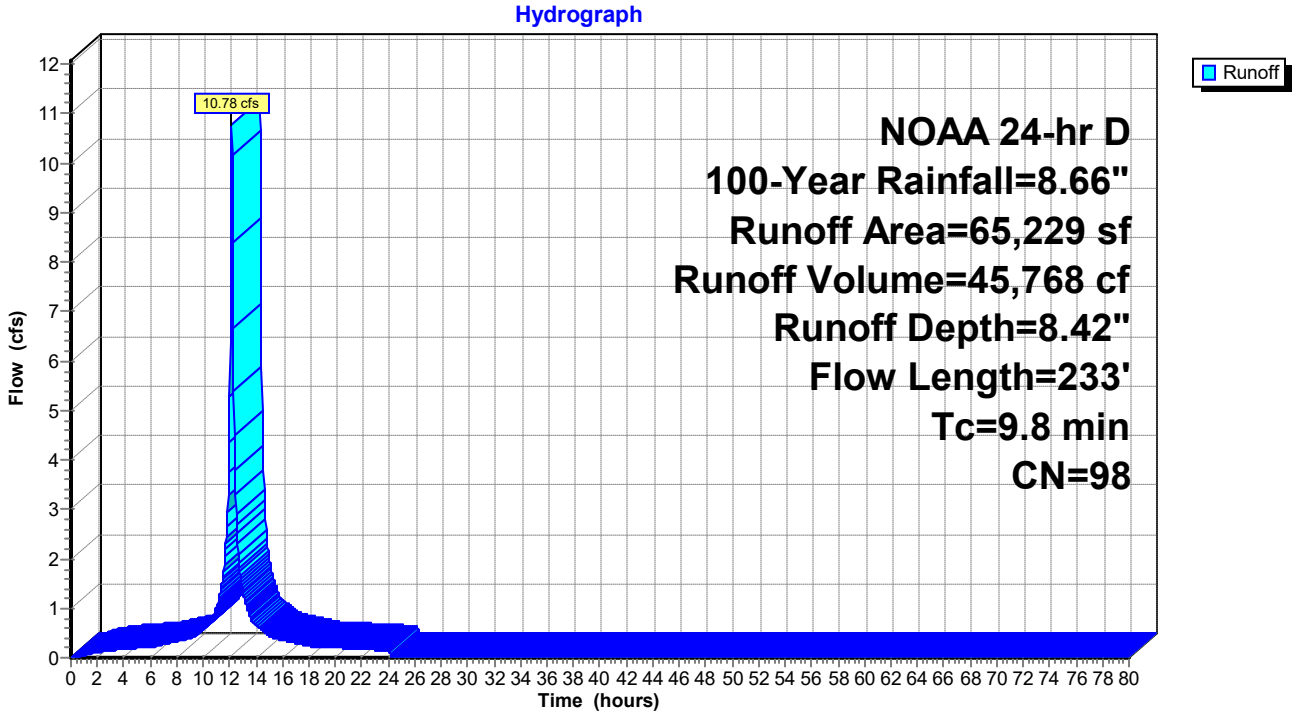
Runoff = 10.78 cfs @ 12.17 hrs, Volume= 45,768 cf, Depth= 8.42"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
4,356	98	Roofs, HSG D
7,377	98	Paved parking, HSG D
27,007	98	Roofs, HSG C
26,489	98	Paved parking, HSG C
65,229	98	Weighted Average
65,229		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 45S: Basin 11 - Imp



Hydrograph for Subcatchment 45S: Basin 11 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.03	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.09	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.13	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.16	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.18	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.19	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.21	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.24	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.28	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.33	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.38	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.50	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.67	51.20	8.66	8.42	0.00
11.20	2.42	2.19	1.22	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**5.26**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**1.65**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.79	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.57	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.41	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.36	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.31	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.26	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.23	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.21	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.20	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.19	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.18	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.17	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.16	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.14	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 46S: Basin 11 - Perv

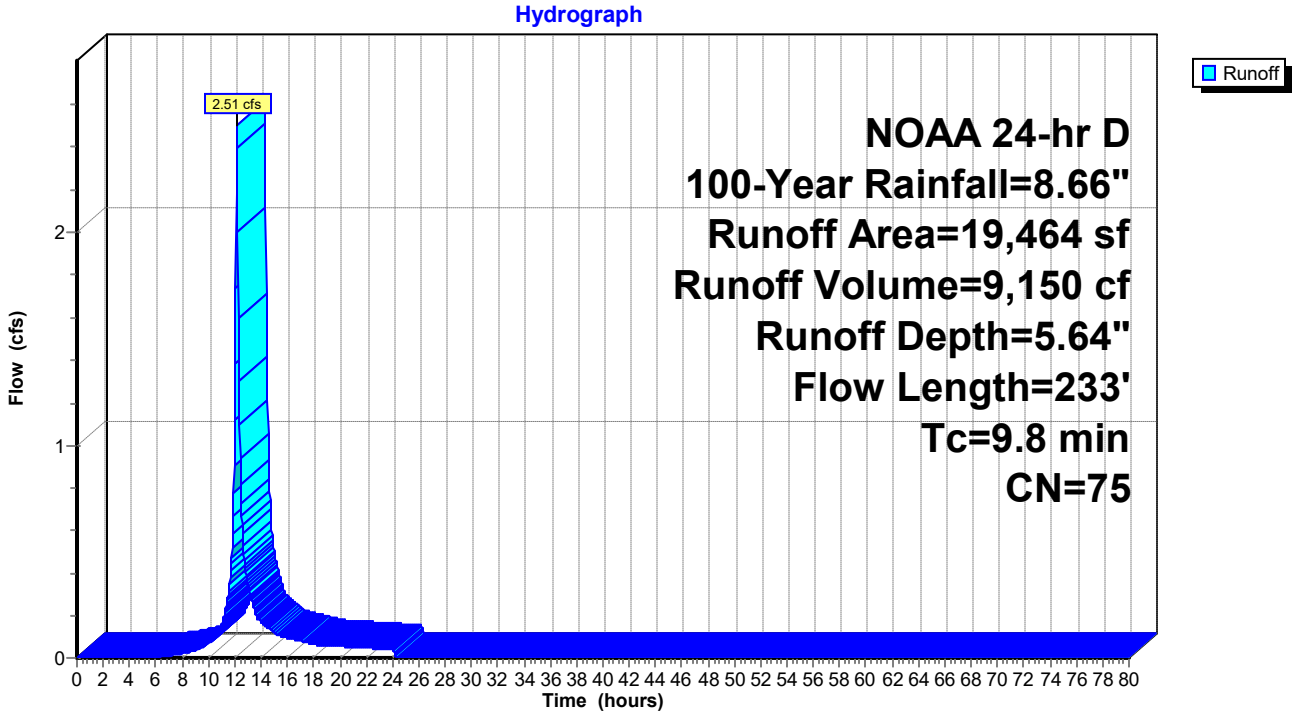
Runoff = 2.51 cfs @ 12.17 hrs, Volume= 9,150 cf, Depth= 5.64"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
2,920	80	>75% Grass cover, Good, HSG D
16,544	74	>75% Grass cover, Good, HSG C
19,464	75	Weighted Average
19,464		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 46S: Basin 11 - Perv



Hydrograph for Subcatchment 46S: Basin 11 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	5.64	0.00
0.80	0.08	0.00	0.00	41.60	8.66	5.64	0.00
1.60	0.16	0.00	0.00	42.40	8.66	5.64	0.00
2.40	0.25	0.00	0.00	43.20	8.66	5.64	0.00
3.20	0.35	0.00	0.00	44.00	8.66	5.64	0.00
4.00	0.45	0.00	0.00	44.80	8.66	5.64	0.00
4.80	0.56	0.00	0.00	45.60	8.66	5.64	0.00
5.60	0.68	0.00	0.00	46.40	8.66	5.64	0.00
6.40	0.80	0.01	0.00	47.20	8.66	5.64	0.00
7.20	0.95	0.02	0.01	48.00	8.66	5.64	0.00
8.00	1.12	0.06	0.02	48.80	8.66	5.64	0.00
8.80	1.32	0.11	0.03	49.60	8.66	5.64	0.00
9.60	1.56	0.19	0.06	50.40	8.66	5.64	0.00
10.40	1.89	0.33	0.09	51.20	8.66	5.64	0.00
11.20	2.42	0.61	0.20	52.00	8.66	5.64	0.00
12.00	4.15	1.78	**1.12**	52.80	8.66	5.64	0.00
12.80	6.24	3.49	**0.42**	53.60	8.66	5.64	0.00
13.60	6.77	3.95	0.21	54.40	8.66	5.64	0.00
14.40	7.10	4.23	0.15	55.20	8.66	5.64	0.00
15.20	7.34	4.45	0.11	56.00	8.66	5.64	0.00
16.00	7.54	4.63	0.10	56.80	8.66	5.64	0.00
16.80	7.71	4.78	0.08	57.60	8.66	5.64	0.00
17.60	7.86	4.91	0.07	58.40	8.66	5.64	0.00
18.40	7.98	5.02	0.06	59.20	8.66	5.64	0.00
19.20	8.10	5.13	0.06	60.00	8.66	5.64	0.00
20.00	8.21	5.23	0.05	60.80	8.66	5.64	0.00
20.80	8.31	5.32	0.05	61.60	8.66	5.64	0.00
21.60	8.41	5.41	0.05	62.40	8.66	5.64	0.00
22.40	8.50	5.49	0.05	63.20	8.66	5.64	0.00
23.20	8.58	5.57	0.04	64.00	8.66	5.64	0.00
24.00	**8.66**	**5.64**	0.04	64.80	8.66	5.64	0.00
24.80	8.66	5.64	0.00	65.60	8.66	5.64	0.00
25.60	8.66	5.64	0.00	66.40	8.66	5.64	0.00
26.40	8.66	5.64	0.00	67.20	8.66	5.64	0.00
27.20	8.66	5.64	0.00	68.00	8.66	5.64	0.00
28.00	8.66	5.64	0.00	68.80	8.66	5.64	0.00
28.80	8.66	5.64	0.00	69.60	8.66	5.64	0.00
29.60	8.66	5.64	0.00	70.40	8.66	5.64	0.00
30.40	8.66	5.64	0.00	71.20	8.66	5.64	0.00
31.20	8.66	5.64	0.00	72.00	8.66	5.64	0.00
32.00	8.66	5.64	0.00	72.80	8.66	5.64	0.00
32.80	8.66	5.64	0.00	73.60	8.66	5.64	0.00
33.60	8.66	5.64	0.00	74.40	8.66	5.64	0.00
34.40	8.66	5.64	0.00	75.20	8.66	5.64	0.00
35.20	8.66	5.64	0.00	76.00	8.66	5.64	0.00
36.00	8.66	5.64	0.00	76.80	8.66	5.64	0.00
36.80	8.66	5.64	0.00	77.60	8.66	5.64	0.00
37.60	8.66	5.64	0.00	78.40	8.66	5.64	0.00
38.40	8.66	5.64	0.00	79.20	8.66	5.64	0.00
39.20	8.66	5.64	0.00	80.00	8.66	5.64	0.00
40.00	8.66	5.64	0.00				

Summary for Subcatchment 51S: Basin 10 - Imp

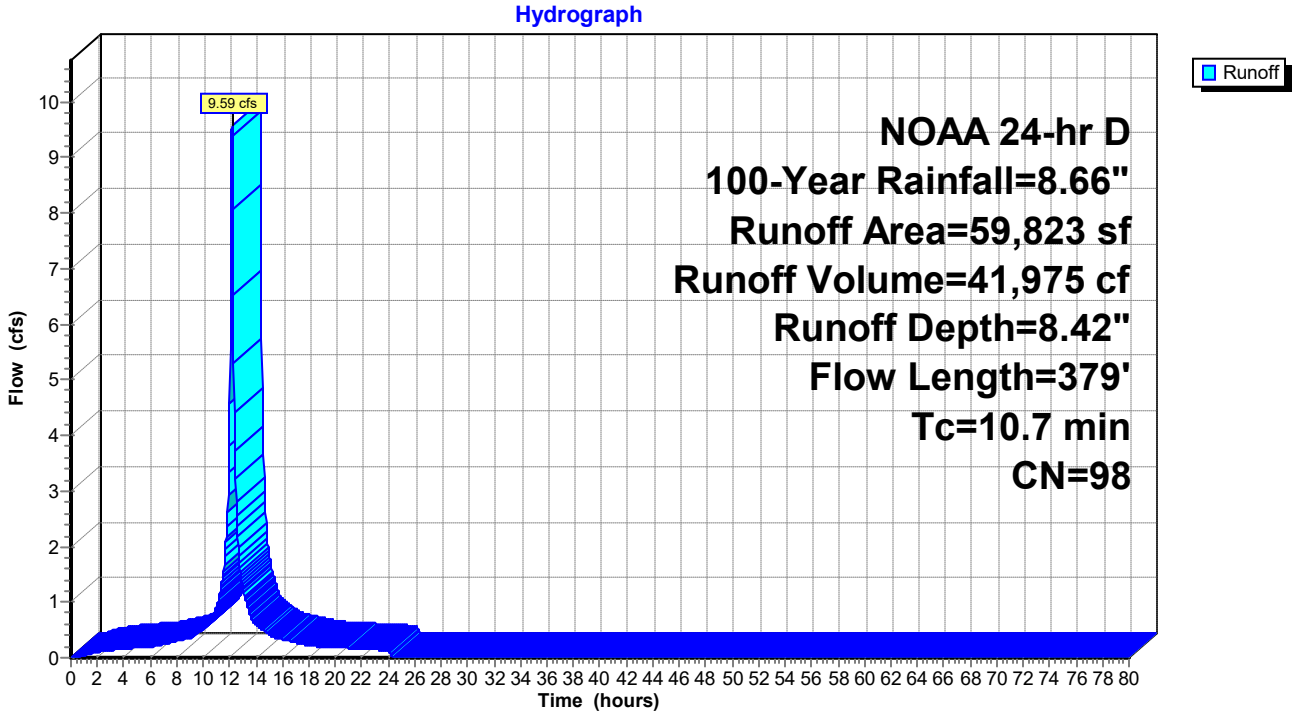
Runoff = 9.59 cfs @ 12.18 hrs, Volume= 41,975 cf, Depth= 8.42"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
19,602	98	Paved parking, HSG C
35,284	98	Roofs, HSG C
4,937	98	Paved parking, HSG D
59,823	98	Weighted Average
59,823		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 51S: Basin 10 - Imp



Hydrograph for Subcatchment 51S: Basin 10 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.02	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.08	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.12	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.14	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.16	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.18	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.19	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.21	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.26	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.30	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.35	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.46	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.61	51.20	8.66	8.42	0.00
11.20	2.42	2.19	1.10	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**4.57**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**1.54**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.73	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.52	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.38	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.33	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.29	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.24	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.21	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.20	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.19	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.18	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.16	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.15	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.14	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.13	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 52S: Basin 10 - Perv

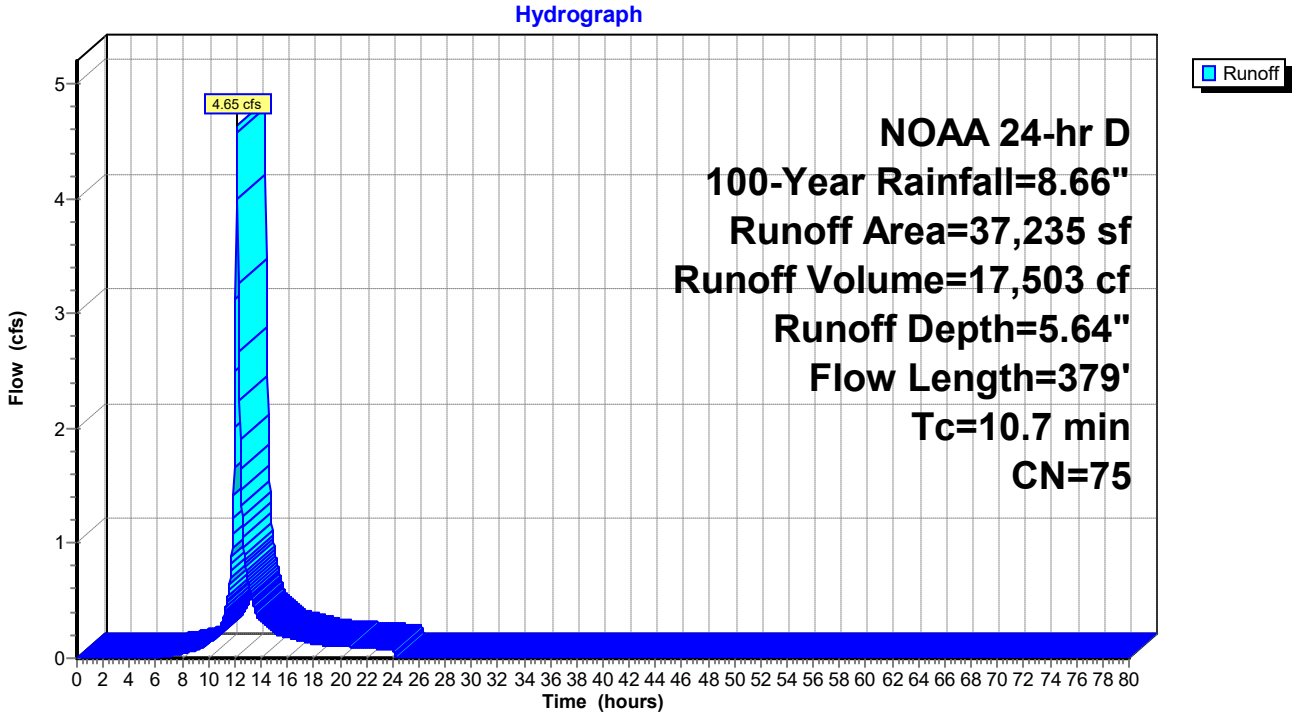
Runoff = 4.65 cfs @ 12.18 hrs, Volume= 17,503 cf, Depth= 5.64"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
7,626	80	>75% Grass cover, Good, HSG D
29,609	74	>75% Grass cover, Good, HSG C
37,235	75	Weighted Average
37,235		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 52S: Basin 10 - Perv



Hydrograph for Subcatchment 52S: Basin 10 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	5.64	0.00
0.80	0.08	0.00	0.00	41.60	8.66	5.64	0.00
1.60	0.16	0.00	0.00	42.40	8.66	5.64	0.00
2.40	0.25	0.00	0.00	43.20	8.66	5.64	0.00
3.20	0.35	0.00	0.00	44.00	8.66	5.64	0.00
4.00	0.45	0.00	0.00	44.80	8.66	5.64	0.00
4.80	0.56	0.00	0.00	45.60	8.66	5.64	0.00
5.60	0.68	0.00	0.00	46.40	8.66	5.64	0.00
6.40	0.80	0.01	0.01	47.20	8.66	5.64	0.00
7.20	0.95	0.02	0.02	48.00	8.66	5.64	0.00
8.00	1.12	0.06	0.04	48.80	8.66	5.64	0.00
8.80	1.32	0.11	0.06	49.60	8.66	5.64	0.00
9.60	1.56	0.19	0.10	50.40	8.66	5.64	0.00
10.40	1.89	0.33	0.17	51.20	8.66	5.64	0.00
11.20	2.42	0.61	0.38	52.00	8.66	5.64	0.00
12.00	4.15	1.78	**2.02**	52.80	8.66	5.64	0.00
12.80	6.24	3.49	**0.82**	53.60	8.66	5.64	0.00
13.60	6.77	3.95	0.40	54.40	8.66	5.64	0.00
14.40	7.10	4.23	0.29	55.20	8.66	5.64	0.00
15.20	7.34	4.45	0.21	56.00	8.66	5.64	0.00
16.00	7.54	4.63	0.18	56.80	8.66	5.64	0.00
16.80	7.71	4.78	0.16	57.60	8.66	5.64	0.00
17.60	7.86	4.91	0.14	58.40	8.66	5.64	0.00
18.40	7.98	5.02	0.12	59.20	8.66	5.64	0.00
19.20	8.10	5.13	0.11	60.00	8.66	5.64	0.00
20.00	8.21	5.23	0.10	60.80	8.66	5.64	0.00
20.80	8.31	5.32	0.10	61.60	8.66	5.64	0.00
21.60	8.41	5.41	0.09	62.40	8.66	5.64	0.00
22.40	8.50	5.49	0.09	63.20	8.66	5.64	0.00
23.20	8.58	5.57	0.08	64.00	8.66	5.64	0.00
24.00	**8.66**	**5.64**	0.08	64.80	8.66	5.64	0.00
24.80	8.66	5.64	0.00	65.60	8.66	5.64	0.00
25.60	8.66	5.64	0.00	66.40	8.66	5.64	0.00
26.40	8.66	5.64	0.00	67.20	8.66	5.64	0.00
27.20	8.66	5.64	0.00	68.00	8.66	5.64	0.00
28.00	8.66	5.64	0.00	68.80	8.66	5.64	0.00
28.80	8.66	5.64	0.00	69.60	8.66	5.64	0.00
29.60	8.66	5.64	0.00	70.40	8.66	5.64	0.00
30.40	8.66	5.64	0.00	71.20	8.66	5.64	0.00
31.20	8.66	5.64	0.00	72.00	8.66	5.64	0.00
32.00	8.66	5.64	0.00	72.80	8.66	5.64	0.00
32.80	8.66	5.64	0.00	73.60	8.66	5.64	0.00
33.60	8.66	5.64	0.00	74.40	8.66	5.64	0.00
34.40	8.66	5.64	0.00	75.20	8.66	5.64	0.00
35.20	8.66	5.64	0.00	76.00	8.66	5.64	0.00
36.00	8.66	5.64	0.00	76.80	8.66	5.64	0.00
36.80	8.66	5.64	0.00	77.60	8.66	5.64	0.00
37.60	8.66	5.64	0.00	78.40	8.66	5.64	0.00
38.40	8.66	5.64	0.00	79.20	8.66	5.64	0.00
39.20	8.66	5.64	0.00	80.00	8.66	5.64	0.00
40.00	8.66	5.64	0.00				

Summary for Subcatchment 53S: Basin 9 - Imp

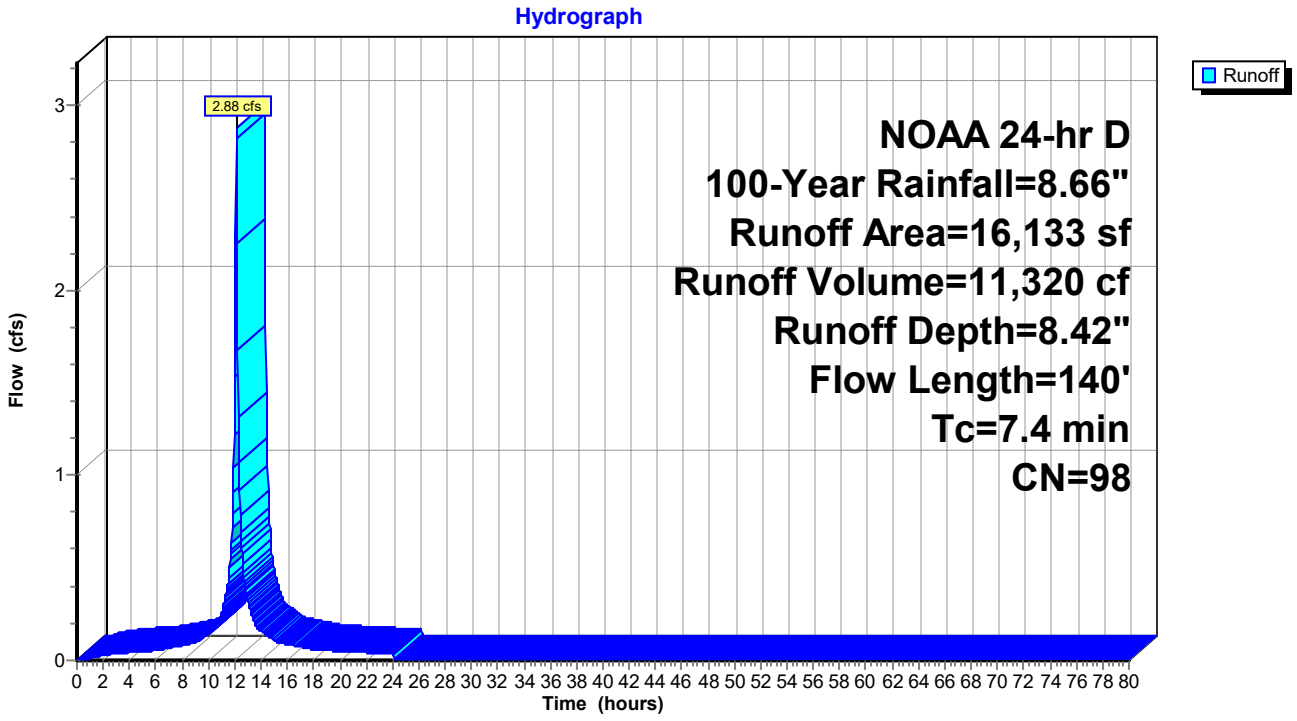
Runoff = 2.88 cfs @ 12.14 hrs, Volume= 11,320 cf, Depth= 8.42"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
6,889	98	Paved parking, HSG D
9,244	98	Paved parking, HSG C
16,133	98	Weighted Average
16,133		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 53S: Basin 9 - Imp



Hydrograph for Subcatchment 53S: Basin 9 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	8.42	0.00
0.80	0.08	0.01	0.01	41.60	8.66	8.42	0.00
1.60	0.16	0.05	0.02	42.40	8.66	8.42	0.00
2.40	0.25	0.11	0.03	43.20	8.66	8.42	0.00
3.20	0.35	0.19	0.04	44.00	8.66	8.42	0.00
4.00	0.45	0.28	0.04	44.80	8.66	8.42	0.00
4.80	0.56	0.38	0.05	45.60	8.66	8.42	0.00
5.60	0.68	0.48	0.05	46.40	8.66	8.42	0.00
6.40	0.80	0.60	0.06	47.20	8.66	8.42	0.00
7.20	0.95	0.74	0.07	48.00	8.66	8.42	0.00
8.00	1.12	0.91	0.08	48.80	8.66	8.42	0.00
8.80	1.32	1.10	0.09	49.60	8.66	8.42	0.00
9.60	1.56	1.34	0.13	50.40	8.66	8.42	0.00
10.40	1.89	1.67	0.17	51.20	8.66	8.42	0.00
11.20	2.42	2.19	0.31	52.00	8.66	8.42	0.00
12.00	4.15	3.91	**1.53**	52.80	8.66	8.42	0.00
12.80	6.24	6.00	**0.39**	53.60	8.66	8.42	0.00
13.60	6.77	6.53	0.19	54.40	8.66	8.42	0.00
14.40	7.10	6.86	0.14	55.20	8.66	8.42	0.00
15.20	7.34	7.10	0.10	56.00	8.66	8.42	0.00
16.00	7.54	7.30	0.09	56.80	8.66	8.42	0.00
16.80	7.71	7.47	0.08	57.60	8.66	8.42	0.00
17.60	7.86	7.62	0.06	58.40	8.66	8.42	0.00
18.40	7.98	7.74	0.06	59.20	8.66	8.42	0.00
19.20	8.10	7.86	0.05	60.00	8.66	8.42	0.00
20.00	8.21	7.97	0.05	60.80	8.66	8.42	0.00
20.80	8.31	8.07	0.05	61.60	8.66	8.42	0.00
21.60	8.41	8.17	0.04	62.40	8.66	8.42	0.00
22.40	8.50	8.26	0.04	63.20	8.66	8.42	0.00
23.20	8.58	8.34	0.04	64.00	8.66	8.42	0.00
24.00	**8.66**	**8.42**	0.04	64.80	8.66	8.42	0.00
24.80	8.66	8.42	0.00	65.60	8.66	8.42	0.00
25.60	8.66	8.42	0.00	66.40	8.66	8.42	0.00
26.40	8.66	8.42	0.00	67.20	8.66	8.42	0.00
27.20	8.66	8.42	0.00	68.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00	68.80	8.66	8.42	0.00
28.80	8.66	8.42	0.00	69.60	8.66	8.42	0.00
29.60	8.66	8.42	0.00	70.40	8.66	8.42	0.00
30.40	8.66	8.42	0.00	71.20	8.66	8.42	0.00
31.20	8.66	8.42	0.00	72.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00	72.80	8.66	8.42	0.00
32.80	8.66	8.42	0.00	73.60	8.66	8.42	0.00
33.60	8.66	8.42	0.00	74.40	8.66	8.42	0.00
34.40	8.66	8.42	0.00	75.20	8.66	8.42	0.00
35.20	8.66	8.42	0.00	76.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00	76.80	8.66	8.42	0.00
36.80	8.66	8.42	0.00	77.60	8.66	8.42	0.00
37.60	8.66	8.42	0.00	78.40	8.66	8.42	0.00
38.40	8.66	8.42	0.00	79.20	8.66	8.42	0.00
39.20	8.66	8.42	0.00	80.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00				

Summary for Subcatchment 54S: Basin 9 - Perv

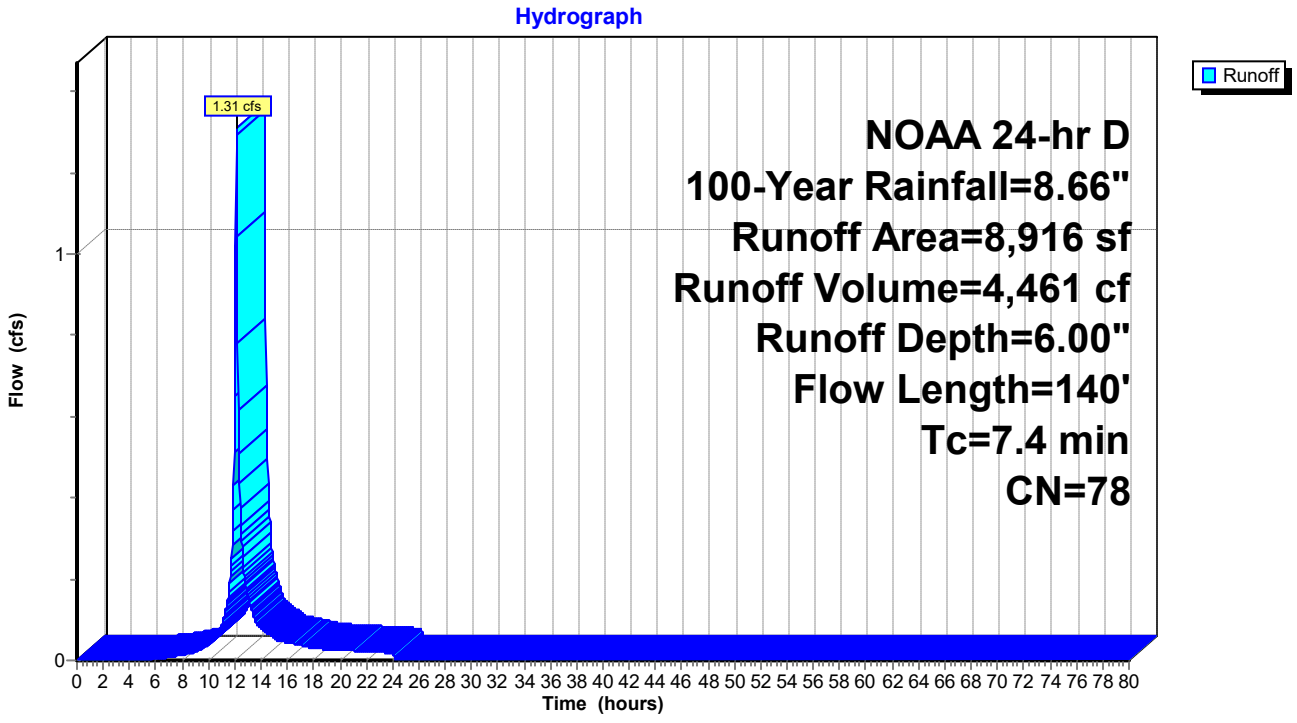
Runoff = 1.31 cfs @ 12.14 hrs, Volume= 4,461 cf, Depth= 6.00"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
2,537	74	>75% Grass cover, Good, HSG C
6,379	80	>75% Grass cover, Good, HSG D
8,916	78	Weighted Average
8,916		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 54S: Basin 9 - Perv



Hydrograph for Subcatchment 54S: Basin 9 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	8.66	6.00	0.00
0.80	0.08	0.00	0.00	41.60	8.66	6.00	0.00
1.60	0.16	0.00	0.00	42.40	8.66	6.00	0.00
2.40	0.25	0.00	0.00	43.20	8.66	6.00	0.00
3.20	0.35	0.00	0.00	44.00	8.66	6.00	0.00
4.00	0.45	0.00	0.00	44.80	8.66	6.00	0.00
4.80	0.56	0.00	0.00	45.60	8.66	6.00	0.00
5.60	0.68	0.00	0.00	46.40	8.66	6.00	0.00
6.40	0.80	0.02	0.00	47.20	8.66	6.00	0.00
7.20	0.95	0.05	0.01	48.00	8.66	6.00	0.00
8.00	1.12	0.09	0.01	48.80	8.66	6.00	0.00
8.80	1.32	0.16	0.02	49.60	8.66	6.00	0.00
9.60	1.56	0.26	0.03	50.40	8.66	6.00	0.00
10.40	1.89	0.43	0.05	51.20	8.66	6.00	0.00
11.20	2.42	0.74	0.11	52.00	8.66	6.00	0.00
12.00	4.15	2.01	**0.65**	52.80	8.66	6.00	0.00
12.80	6.24	3.79	**0.19**	53.60	8.66	6.00	0.00
13.60	6.77	4.26	0.09	54.40	8.66	6.00	0.00
14.40	7.10	4.56	0.07	55.20	8.66	6.00	0.00
15.20	7.34	4.78	0.05	56.00	8.66	6.00	0.00
16.00	7.54	4.96	0.04	56.80	8.66	6.00	0.00
16.80	7.71	5.12	0.04	57.60	8.66	6.00	0.00
17.60	7.86	5.26	0.03	58.40	8.66	6.00	0.00
18.40	7.98	5.37	0.03	59.20	8.66	6.00	0.00
19.20	8.10	5.48	0.03	60.00	8.66	6.00	0.00
20.00	8.21	5.58	0.03	60.80	8.66	6.00	0.00
20.80	8.31	5.68	0.02	61.60	8.66	6.00	0.00
21.60	8.41	5.77	0.02	62.40	8.66	6.00	0.00
22.40	8.50	5.85	0.02	63.20	8.66	6.00	0.00
23.20	8.58	5.93	0.02	64.00	8.66	6.00	0.00
24.00	**8.66**	**6.00**	0.02	64.80	8.66	6.00	0.00
24.80	8.66	6.00	0.00	65.60	8.66	6.00	0.00
25.60	8.66	6.00	0.00	66.40	8.66	6.00	0.00
26.40	8.66	6.00	0.00	67.20	8.66	6.00	0.00
27.20	8.66	6.00	0.00	68.00	8.66	6.00	0.00
28.00	8.66	6.00	0.00	68.80	8.66	6.00	0.00
28.80	8.66	6.00	0.00	69.60	8.66	6.00	0.00
29.60	8.66	6.00	0.00	70.40	8.66	6.00	0.00
30.40	8.66	6.00	0.00	71.20	8.66	6.00	0.00
31.20	8.66	6.00	0.00	72.00	8.66	6.00	0.00
32.00	8.66	6.00	0.00	72.80	8.66	6.00	0.00
32.80	8.66	6.00	0.00	73.60	8.66	6.00	0.00
33.60	8.66	6.00	0.00	74.40	8.66	6.00	0.00
34.40	8.66	6.00	0.00	75.20	8.66	6.00	0.00
35.20	8.66	6.00	0.00	76.00	8.66	6.00	0.00
36.00	8.66	6.00	0.00	76.80	8.66	6.00	0.00
36.80	8.66	6.00	0.00	77.60	8.66	6.00	0.00
37.60	8.66	6.00	0.00	78.40	8.66	6.00	0.00
38.40	8.66	6.00	0.00	79.20	8.66	6.00	0.00
39.20	8.66	6.00	0.00	80.00	8.66	6.00	0.00
40.00	8.66	6.00	0.00				

Summary for Pond 21P: Basin 3

Inflow Area = 51,670 sf, 62.76% Impervious, Inflow Depth = 7.34" for 100-Year event
Inflow = 8.22 cfs @ 12.15 hrs, Volume= 31,604 cf
Outflow = 7.57 cfs @ 12.19 hrs, Volume= 31,604 cf, Atten= 8%, Lag= 2.1 min
Discarded = 1.21 cfs @ 11.60 hrs, Volume= 24,099 cf
Primary = 6.36 cfs @ 12.19 hrs, Volume= 7,506 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 559.85' @ 12.19 hrs Surf.Area= 5,227 sf Storage= 1,781 cf

Plug-Flow detention time= 2.7 min calculated for 31,589 cf (100% of inflow)
Center-of-Mass det. time= 2.7 min (768.2 - 765.6)

Volume	Invert	Avail.Storage	Storage Description
#1	559.00'	4,537 cf	**Custom Stage Data (Prismatic)** Listed below 11,343 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
559.00	5,227	0	0
560.00	5,227	5,227	5,227
561.00	5,227	5,227	10,454
561.17	5,227	889	11,343

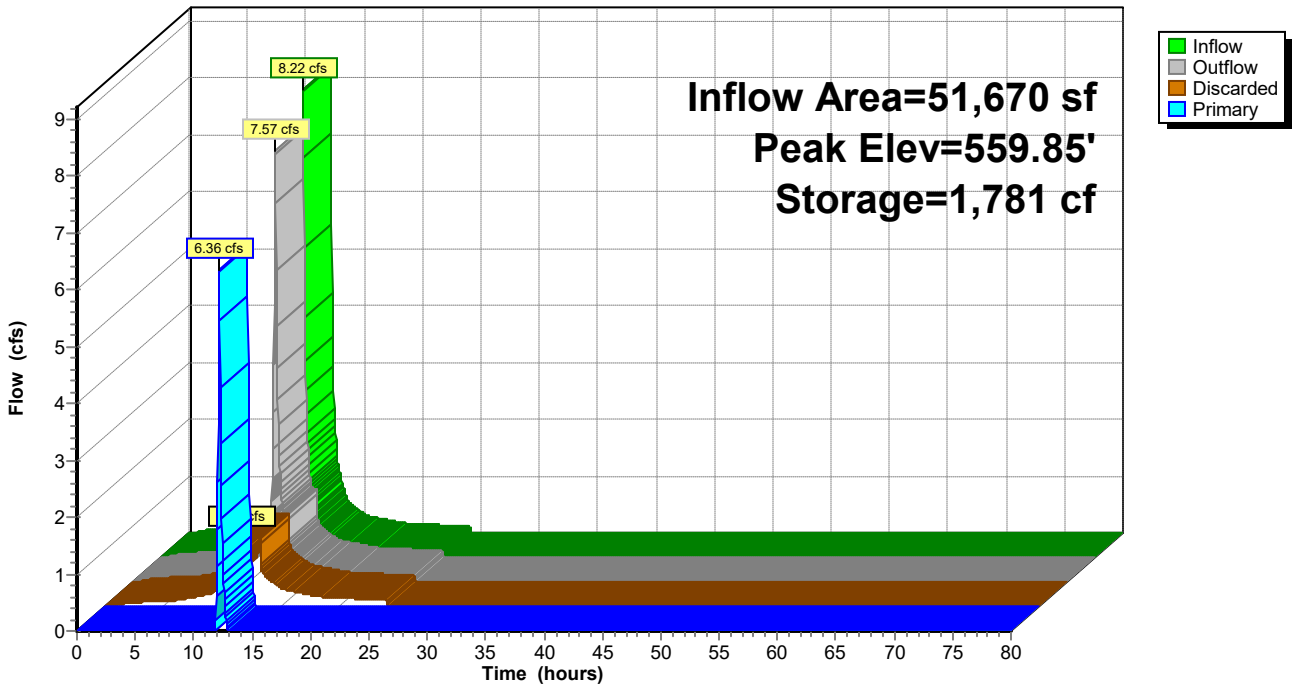
Device	Routing	Invert	Outlet Devices
#1	Primary	559.22'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	559.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=1.21 cfs @ 11.60 hrs HW=559.03' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.21 cfs)

Primary OutFlow Max=6.24 cfs @ 12.19 hrs HW=559.84' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 6.24 cfs @ 2.58 fps)

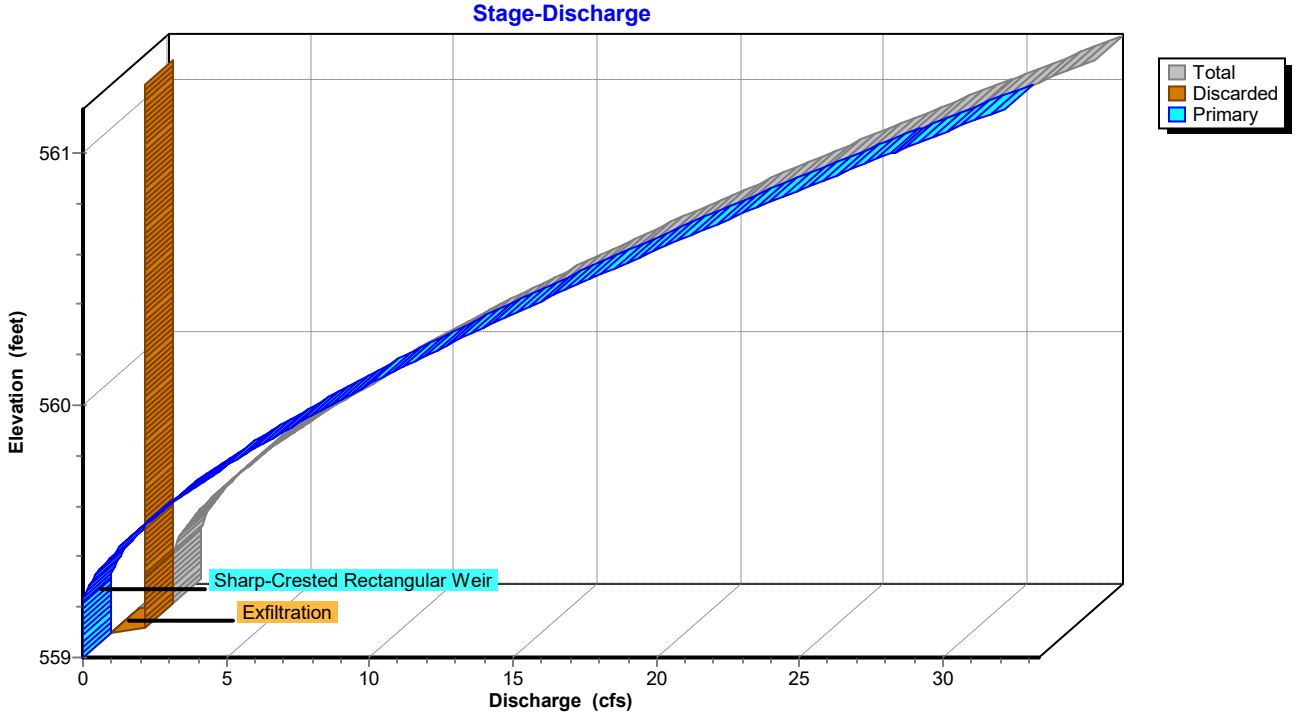
Pond 21P: Basin 3

Hydrograph



Pond 21P: Basin 3

Stage-Discharge



Hydrograph for Pond 21P: Basin 3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	559.00	0.00	0.00	0.00
2.00	0.06	2	559.00	0.06	0.06	0.00
4.00	0.09	3	559.00	0.09	0.09	0.00
6.00	0.11	4	559.00	0.11	0.11	0.00
8.00	0.18	7	559.00	0.18	0.18	0.00
10.00	0.36	13	559.01	0.36	**0.36**	0.00
12.00	**4.08**	**1,018**	**559.49**	**2.99**	**1.21**	**1.78**
14.00	**0.49**	**18**	**559.01**	**0.49**	0.49	**0.00**
16.00	0.27	10	559.00	0.27	0.27	0.00
18.00	0.18	7	559.00	0.18	0.18	0.00
20.00	0.15	6	559.00	0.15	0.15	0.00
22.00	0.13	5	559.00	0.13	0.13	0.00
24.00	0.11	4	559.00	0.11	0.11	0.00
26.00	0.00	0	559.00	0.00	0.00	0.00
28.00	0.00	0	559.00	0.00	0.00	0.00
30.00	0.00	0	559.00	0.00	0.00	0.00
32.00	0.00	0	559.00	0.00	0.00	0.00
34.00	0.00	0	559.00	0.00	0.00	0.00
36.00	0.00	0	559.00	0.00	0.00	0.00
38.00	0.00	0	559.00	0.00	0.00	0.00
40.00	0.00	0	559.00	0.00	0.00	0.00
42.00	0.00	0	559.00	0.00	0.00	0.00
44.00	0.00	0	559.00	0.00	0.00	0.00
46.00	0.00	0	559.00	0.00	0.00	0.00
48.00	0.00	0	559.00	0.00	0.00	0.00
50.00	0.00	0	559.00	0.00	0.00	0.00
52.00	0.00	0	559.00	0.00	0.00	0.00
54.00	0.00	0	559.00	0.00	0.00	0.00
56.00	0.00	0	559.00	0.00	0.00	0.00
58.00	0.00	0	559.00	0.00	0.00	0.00
60.00	0.00	0	559.00	0.00	0.00	0.00
62.00	0.00	0	559.00	0.00	0.00	0.00
64.00	0.00	0	559.00	0.00	0.00	0.00
66.00	0.00	0	559.00	0.00	0.00	0.00
68.00	0.00	0	559.00	0.00	0.00	0.00
70.00	0.00	0	559.00	0.00	0.00	0.00
72.00	0.00	0	559.00	0.00	0.00	0.00
74.00	0.00	0	559.00	0.00	0.00	0.00
76.00	0.00	0	559.00	0.00	0.00	0.00
78.00	0.00	0	559.00	0.00	0.00	0.00
80.00	0.00	0	559.00	0.00	0.00	0.00

Stage-Discharge for Pond 21P: Basin 3

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
559.00	0.00	**0.00**	0.00
559.05	1.21	**1.21**	0.00
559.10	1.21	1.21	0.00
559.15	1.21	1.21	0.00
559.20	1.21	1.21	0.00
559.25	1.28	1.21	0.07
559.30	1.50	1.21	0.29
559.35	1.82	1.21	0.61
559.40	2.20	1.21	0.99
559.45	2.64	1.21	1.43
559.50	3.12	1.21	1.91
559.55	3.65	1.21	2.44
559.60	4.22	1.21	3.01
559.65	4.82	1.21	3.61
559.70	5.46	1.21	4.25
559.75	6.12	1.21	4.91
559.80	6.82	1.21	5.61
559.85	7.54	1.21	6.33
559.90	8.30	1.21	7.09
559.95	9.07	1.21	7.86
560.00	9.87	1.21	8.66
560.05	10.69	1.21	9.48
560.10	11.53	1.21	10.32
560.15	12.40	1.21	11.19
560.20	13.28	1.21	12.07
560.25	14.18	1.21	12.97
560.30	15.10	1.21	13.89
560.35	16.03	1.21	14.82
560.40	16.99	1.21	15.78
560.45	17.96	1.21	16.75
560.50	18.94	1.21	17.73
560.55	19.94	1.21	18.73
560.60	20.95	1.21	19.74
560.65	21.98	1.21	20.77
560.70	23.02	1.21	21.81
560.75	24.07	1.21	22.86
560.80	25.14	1.21	23.93
560.85	26.21	1.21	25.00
560.90	27.30	1.21	26.09
560.95	28.40	1.21	27.19
561.00	29.51	1.21	28.30
561.05	30.63	1.21	29.42
561.10	31.76	1.21	30.55
561.15	**32.90**	1.21	**31.69**

Stage-Area-Storage for Pond 21P: Basin 3

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
559.00	**5,227**	0
559.05	5,227	105
559.10	5,227	209
559.15	5,227	314
559.20	5,227	418
559.25	5,227	523
559.30	5,227	627
559.35	5,227	732
559.40	5,227	836
559.45	5,227	941
559.50	5,227	1,045
559.55	5,227	1,150
559.60	5,227	1,254
559.65	5,227	1,359
559.70	5,227	1,464
559.75	5,227	1,568
559.80	5,227	1,673
559.85	5,227	1,777
559.90	5,227	1,882
559.95	5,227	1,986
560.00	5,227	2,091
560.05	5,227	2,195
560.10	5,227	2,300
560.15	5,227	2,404
560.20	5,227	2,509
560.25	5,227	2,614
560.30	5,227	2,718
560.35	5,227	2,823
560.40	5,227	2,927
560.45	5,227	3,032
560.50	5,227	3,136
560.55	5,227	3,241
560.60	5,227	3,345
560.65	5,227	3,450
560.70	5,227	3,554
560.75	5,227	3,659
560.80	5,227	3,763
560.85	5,227	3,868
560.90	5,227	3,973
560.95	5,227	4,077
561.00	5,227	4,182
561.05	5,227	4,286
561.10	5,227	4,391
561.15	5,227	**4,495**

Summary for Pond 22P: Basin 4

Inflow Area = 57,587 sf, 86.93% Impervious, Inflow Depth = 8.04" for 100-Year event
Inflow = 10.70 cfs @ 12.12 hrs, Volume= 38,587 cf
Outflow = 2.14 cfs @ 12.47 hrs, Volume= 38,587 cf, Atten= 80%, Lag= 21.3 min
Discarded = 1.13 cfs @ 11.28 hrs, Volume= 32,714 cf
Primary = 1.01 cfs @ 12.47 hrs, Volume= 5,873 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 573.90' @ 12.47 hrs Surf.Area= 12,197 sf Storage= 9,247 cf

Plug-Flow detention time= 29.5 min calculated for 38,568 cf (100% of inflow)
Center-of-Mass det. time= 29.5 min (777.2 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	572.00'	14,197 cf	**Custom Stage Data (Prismatic)** Listed below 35,493 cf Overall x 40.0% Voids

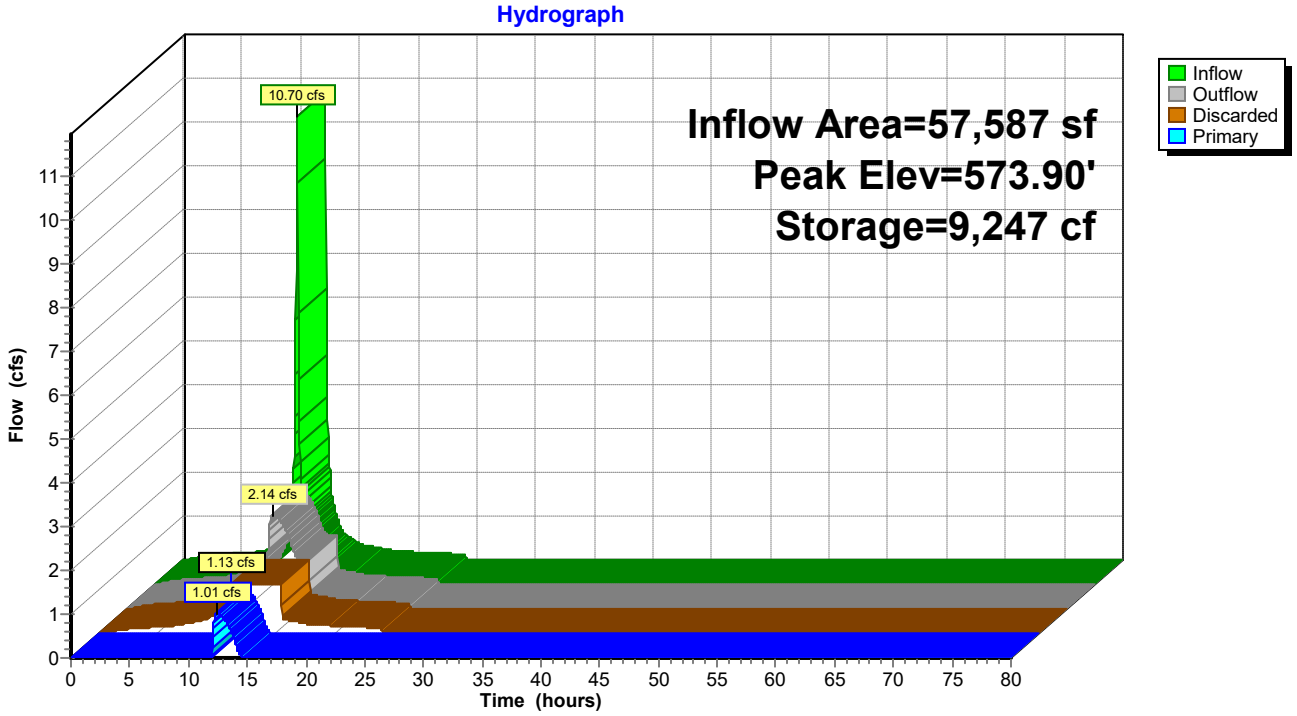
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
572.00	12,197	0	0
573.00	12,197	12,197	12,197
574.00	12,197	12,197	24,394
574.91	12,197	11,099	35,493

Device	Routing	Invert	Outlet Devices
#1	Primary	574.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	572.50'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	572.00'	**4.000 in/hr Exfiltration over Surface area**

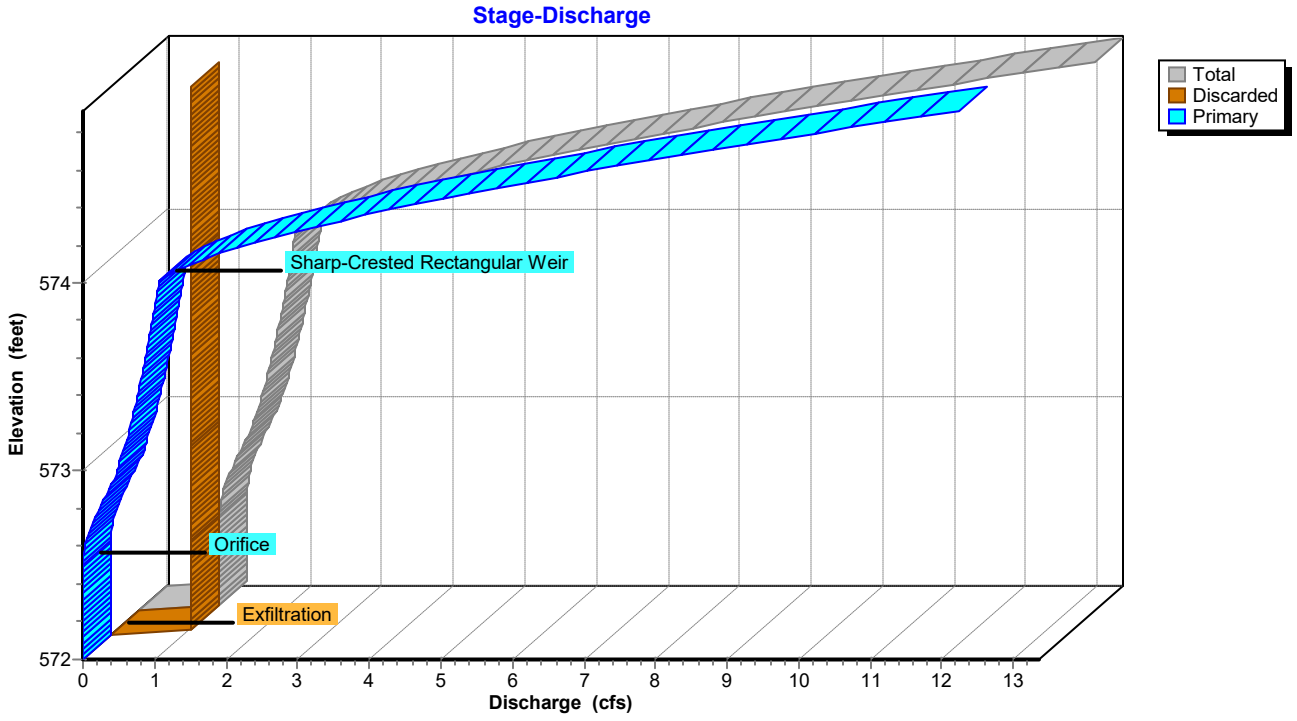
Discarded OutFlow Max=1.13 cfs @ 11.28 hrs HW=572.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.13 cfs)

Primary OutFlow Max=1.01 cfs @ 12.47 hrs HW=573.90' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Orifice Controls 1.01 cfs @ 5.15 fps)

Pond 22P: Basin 4



Pond 22P: Basin 4



Hydrograph for Pond 22P: Basin 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	572.00	0.00	0.00	0.00
2.00	0.09	11	572.00	0.09	0.09	0.00
4.00	0.14	17	572.00	0.14	0.14	0.00
6.00	0.17	21	572.00	0.17	0.17	0.00
8.00	0.26	33	572.01	0.26	0.26	0.00
10.00	0.49	60	572.01	0.48	**0.48**	0.00
12.00	**6.06**	**3,118**	**572.64**	**1.19**	**1.13**	**0.06**
14.00	**0.55**	**4,315**	**572.88**	**1.47**	1.13	**0.34**
16.00	0.31	39	572.01	0.31	0.31	0.00
18.00	0.21	26	572.01	0.21	0.21	0.00
20.00	0.18	22	572.00	0.18	0.18	0.00
22.00	0.15	19	572.00	0.15	0.15	0.00
24.00	0.13	16	572.00	0.13	0.13	0.00
26.00	0.00	0	572.00	0.00	0.00	0.00
28.00	0.00	0	572.00	0.00	0.00	0.00
30.00	0.00	0	572.00	0.00	0.00	0.00
32.00	0.00	0	572.00	0.00	0.00	0.00
34.00	0.00	0	572.00	0.00	0.00	0.00
36.00	0.00	0	572.00	0.00	0.00	0.00
38.00	0.00	0	572.00	0.00	0.00	0.00
40.00	0.00	0	572.00	0.00	0.00	0.00
42.00	0.00	0	572.00	0.00	0.00	0.00
44.00	0.00	0	572.00	0.00	0.00	0.00
46.00	0.00	0	572.00	0.00	0.00	0.00
48.00	0.00	0	572.00	0.00	0.00	0.00
50.00	0.00	0	572.00	0.00	0.00	0.00
52.00	0.00	0	572.00	0.00	0.00	0.00
54.00	0.00	0	572.00	0.00	0.00	0.00
56.00	0.00	0	572.00	0.00	0.00	0.00
58.00	0.00	0	572.00	0.00	0.00	0.00
60.00	0.00	0	572.00	0.00	0.00	0.00
62.00	0.00	0	572.00	0.00	0.00	0.00
64.00	0.00	0	572.00	0.00	0.00	0.00
66.00	0.00	0	572.00	0.00	0.00	0.00
68.00	0.00	0	572.00	0.00	0.00	0.00
70.00	0.00	0	572.00	0.00	0.00	0.00
72.00	0.00	0	572.00	0.00	0.00	0.00
74.00	0.00	0	572.00	0.00	0.00	0.00
76.00	0.00	0	572.00	0.00	0.00	0.00
78.00	0.00	0	572.00	0.00	0.00	0.00
80.00	0.00	0	572.00	0.00	0.00	0.00

Stage-Discharge for Pond 22P: Basin 4

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
572.00	0.00	**0.00**	0.00
572.05	1.13	**1.13**	0.00
572.10	1.13	1.13	0.00
572.15	1.13	1.13	0.00
572.20	1.13	1.13	0.00
572.25	1.13	1.13	0.00
572.30	1.13	1.13	0.00
572.35	1.13	1.13	0.00
572.40	1.13	1.13	0.00
572.45	1.13	1.13	0.00
572.50	1.13	1.13	0.00
572.55	1.14	1.13	0.01
572.60	1.16	1.13	0.03
572.65	1.19	1.13	0.07
572.70	1.24	1.13	0.11
572.75	1.30	1.13	0.17
572.80	1.36	1.13	0.23
572.85	1.43	1.13	0.30
572.90	1.49	1.13	0.36
572.95	1.55	1.13	0.43
573.00	1.60	1.13	0.47
573.05	1.65	1.13	0.52
573.10	1.69	1.13	0.56
573.15	1.73	1.13	0.60
573.20	1.76	1.13	0.63
573.25	1.80	1.13	0.67
573.30	1.83	1.13	0.70
573.35	1.86	1.13	0.73
573.40	1.89	1.13	0.76
573.45	1.92	1.13	0.79
573.50	1.95	1.13	0.82
573.55	1.97	1.13	0.85
573.60	2.00	1.13	0.87
573.65	2.03	1.13	0.90
573.70	2.05	1.13	0.92
573.75	2.07	1.13	0.95
573.80	2.10	1.13	0.97
573.85	2.12	1.13	0.99
573.90	2.14	1.13	1.01
573.95	2.17	1.13	1.04
574.00	2.19	1.13	1.06
574.05	2.35	1.13	1.22
574.10	2.64	1.13	1.51
574.15	3.00	1.13	1.87
574.20	3.43	1.13	2.30
574.25	3.90	1.13	2.77
574.30	4.42	1.13	3.29
574.35	4.99	1.13	3.86
574.40	5.59	1.13	4.46
574.45	6.22	1.13	5.09
574.50	6.89	1.13	5.76
574.55	7.59	1.13	6.46
574.60	8.31	1.13	7.18
574.65	9.06	1.13	7.93
574.70	9.84	1.13	8.71
574.75	10.64	1.13	9.51
574.80	11.47	1.13	10.34
574.85	12.31	1.13	11.18
574.90	**13.18**	1.13	**12.05**

Stage-Area-Storage for Pond 22P: Basin 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
572.00	**12,197**	0
572.05	12,197	244
572.10	12,197	488
572.15	12,197	732
572.20	12,197	976
572.25	12,197	1,220
572.30	12,197	1,464
572.35	12,197	1,708
572.40	12,197	1,952
572.45	12,197	2,195
572.50	12,197	2,439
572.55	12,197	2,683
572.60	12,197	2,927
572.65	12,197	3,171
572.70	12,197	3,415
572.75	12,197	3,659
572.80	12,197	3,903
572.85	12,197	4,147
572.90	12,197	4,391
572.95	12,197	4,635
573.00	12,197	4,879
573.05	12,197	5,123
573.10	12,197	5,367
573.15	12,197	5,611
573.20	12,197	5,855
573.25	12,197	6,099
573.30	12,197	6,342
573.35	12,197	6,586
573.40	12,197	6,830
573.45	12,197	7,074
573.50	12,197	7,318
573.55	12,197	7,562
573.60	12,197	7,806
573.65	12,197	8,050
573.70	12,197	8,294
573.75	12,197	8,538
573.80	12,197	8,782
573.85	12,197	9,026
573.90	12,197	9,270
573.95	12,197	9,514
574.00	12,197	9,758
574.05	12,197	10,002
574.10	12,197	10,245
574.15	12,197	10,489
574.20	12,197	10,733
574.25	12,197	10,977
574.30	12,197	11,221
574.35	12,197	11,465
574.40	12,197	11,709
574.45	12,197	11,953
574.50	12,197	12,197
574.55	12,197	12,441
574.60	12,197	12,685
574.65	12,197	12,929
574.70	12,197	13,173
574.75	12,197	13,417
574.80	12,197	13,661
574.85	12,197	13,905
574.90	12,197	**14,149**

Summary for Pond 27P: Basin 2

Inflow Area = 217,925 sf, 51.70% Impervious, Inflow Depth = 4.07" for 100-Year event
Inflow = 22.41 cfs @ 12.18 hrs, Volume= 73,825 cf
Outflow = 14.43 cfs @ 12.30 hrs, Volume= 55,571 cf, Atten= 36%, Lag= 7.0 min
Primary = 14.43 cfs @ 12.30 hrs, Volume= 55,571 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 545.06' @ 12.30 hrs Surf.Area= 28,573 sf Storage= 28,838 cf

Plug-Flow detention time= 161.9 min calculated for 55,543 cf (75% of inflow)
Center-of-Mass det. time= 80.5 min (864.8 - 784.3)

Volume	Invert	Avail.Storage	Storage Description
#1	544.00'	56,873 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

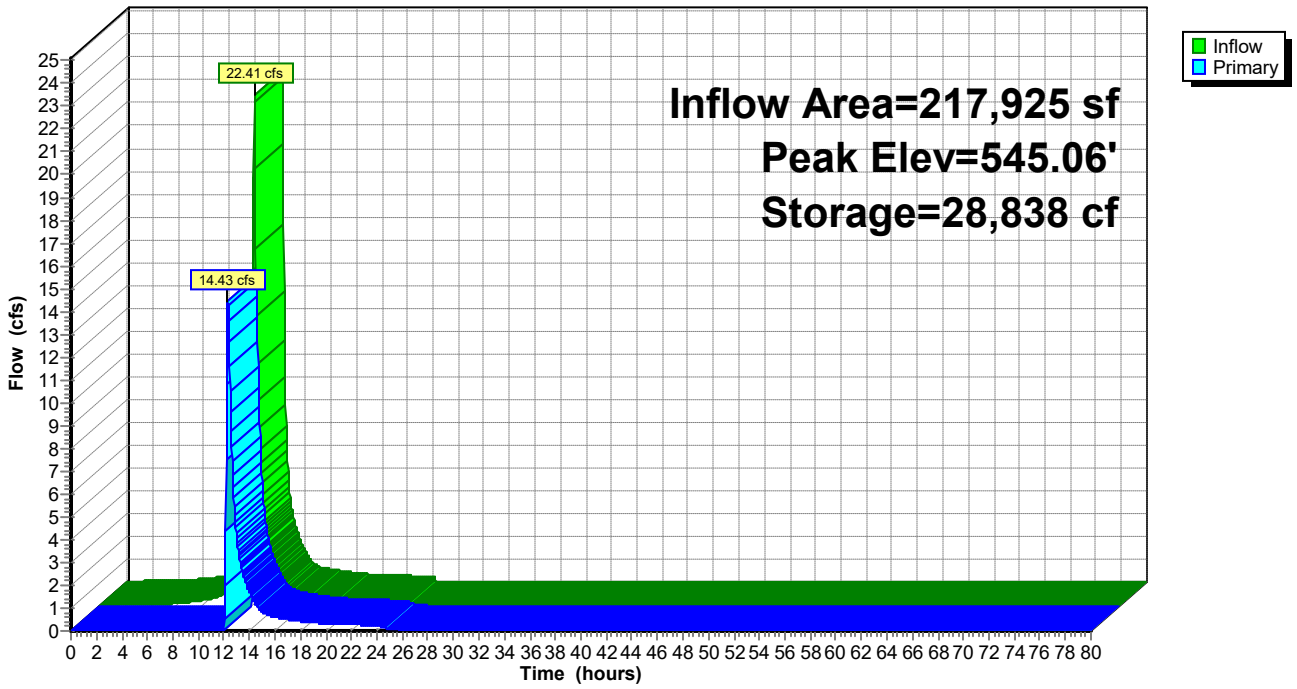
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
544.00	26,023	0	0
546.00	30,850	56,873	56,873

Device	Routing	Invert	Outlet Devices
#1	Primary	545.10'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	544.68'	**18.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.7' Crest Height

Primary OutFlow Max=14.29 cfs @ 12.30 hrs HW=545.05' (Free Discharge)
└**1=Grate** (Controls 0.00 cfs)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 14.29 cfs @ 2.13 fps)

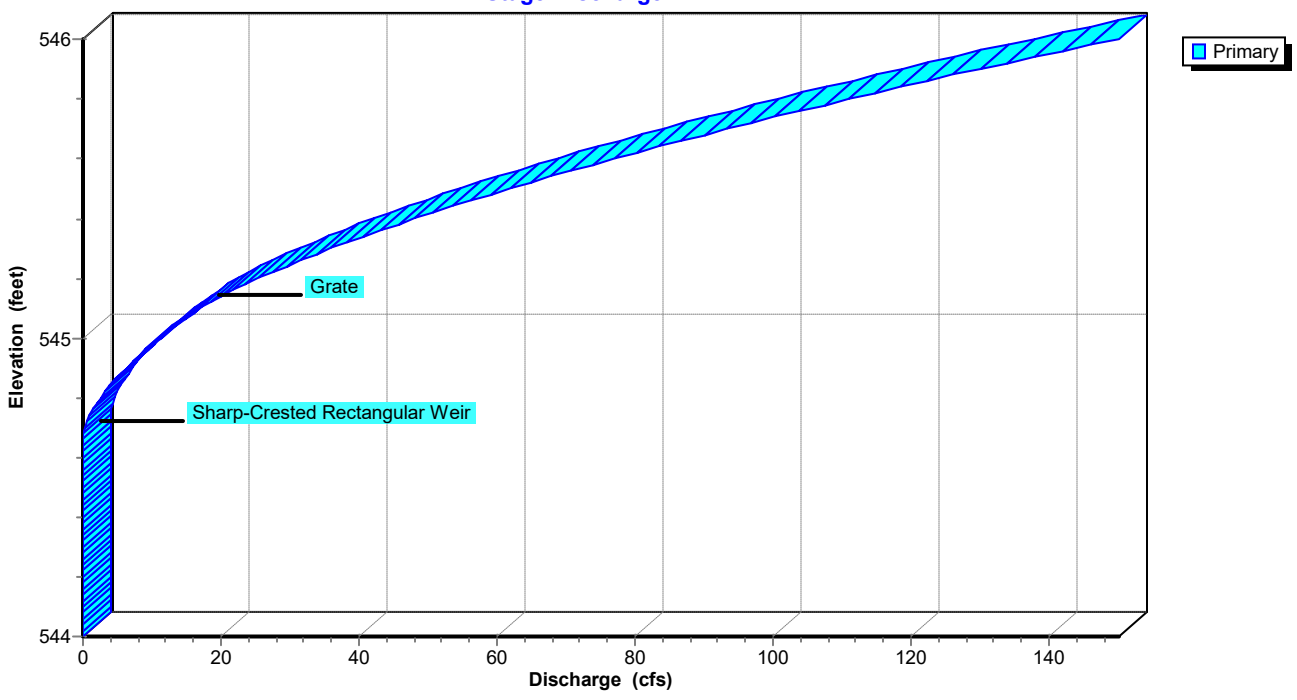
Pond 27P: Basin 2

Hydrograph



Pond 27P: Basin 2

Stage-Discharge



Hydrograph for Pond 27P: Basin 2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	544.00	0.00
2.00	0.05	158	544.01	0.00
4.00	0.08	648	544.02	0.00
6.00	0.13	1,351	544.05	0.00
8.00	0.27	2,737	544.10	0.00
10.00	0.61	5,579	544.21	0.00
12.00	**8.77**	**18,009**	**544.67**	**0.00**
14.00	**1.36**	**20,852**	**544.77**	**1.72**
16.00	0.56	19,549	544.73	0.61
18.00	0.38	19,269	544.72	0.42
20.00	0.32	19,106	544.71	0.33
22.00	0.28	19,023	544.71	0.29
24.00	0.23	18,941	544.70	0.24
26.00	0.00	18,345	544.68	0.03
28.00	0.00	18,264	544.68	0.00
30.00	0.00	18,255	544.68	0.00
32.00	0.00	18,254	544.68	0.00
34.00	0.00	18,254	544.68	0.00
36.00	0.00	18,254	544.68	0.00
38.00	0.00	18,254	544.68	0.00
40.00	0.00	18,254	544.68	0.00
42.00	0.00	18,254	544.68	0.00
44.00	0.00	18,254	544.68	0.00
46.00	0.00	18,254	544.68	0.00
48.00	0.00	18,254	544.68	0.00
50.00	0.00	18,254	544.68	0.00
52.00	0.00	18,254	544.68	0.00
54.00	0.00	18,254	544.68	0.00
56.00	0.00	18,254	544.68	0.00
58.00	0.00	18,254	544.68	0.00
60.00	0.00	18,254	544.68	0.00
62.00	0.00	18,254	544.68	0.00
64.00	0.00	18,254	544.68	0.00
66.00	0.00	18,254	544.68	0.00
68.00	0.00	18,254	544.68	0.00
70.00	0.00	18,254	544.68	0.00
72.00	0.00	18,254	544.68	0.00
74.00	0.00	18,254	544.68	0.00
76.00	0.00	18,254	544.68	0.00
78.00	0.00	18,254	544.68	0.00
80.00	0.00	18,254	544.68	0.00

Stage-Discharge for Pond 27P: Basin 2

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
544.00	0.00	544.51	0.00	545.02	12.32	545.53	66.31
544.01	0.00	544.52	0.00	545.03	12.88	545.54	67.80
544.02	0.00	544.53	0.00	545.04	13.46	545.55	69.30
544.03	0.00	544.54	0.00	545.05	14.05	545.56	70.82
544.04	0.00	544.55	0.00	545.06	14.64	545.57	72.35
544.05	0.00	544.56	0.00	545.07	15.25	545.58	73.89
544.06	0.00	544.57	0.00	545.08	15.86	545.59	75.45
544.07	0.00	544.58	0.00	545.09	16.48	545.60	77.02
544.08	0.00	544.59	0.00	545.10	17.12	545.61	78.60
544.09	0.00	544.60	0.00	545.11	17.81	545.62	80.19
544.10	0.00	544.61	0.00	545.12	18.55	545.63	81.80
544.11	0.00	544.62	0.00	545.13	19.32	545.64	83.43
544.12	0.00	544.63	0.00	545.14	20.13	545.65	85.06
544.13	0.00	544.64	0.00	545.15	20.96	545.66	86.71
544.14	0.00	544.65	0.00	545.16	21.82	545.67	88.37
544.15	0.00	544.66	0.00	545.17	22.71	545.68	90.04
544.16	0.00	544.67	0.00	545.18	23.61	545.69	91.73
544.17	0.00	544.68	0.00	545.19	24.54	545.70	93.43
544.18	0.00	544.69	0.06	545.20	25.49	545.71	95.14
544.19	0.00	544.70	0.17	545.21	26.46	545.72	96.87
544.20	0.00	544.71	0.31	545.22	27.45	545.73	98.60
544.21	0.00	544.72	0.47	545.23	28.45	545.74	100.35
544.22	0.00	544.73	0.66	545.24	29.48	545.75	102.11
544.23	0.00	544.74	0.87	545.25	30.53	545.76	103.89
544.24	0.00	544.75	1.10	545.26	31.59	545.77	105.68
544.25	0.00	544.76	1.35	545.27	32.67	545.78	107.47
544.26	0.00	544.77	1.61	545.28	33.77	545.79	109.29
544.27	0.00	544.78	1.89	545.29	34.88	545.80	111.11
544.28	0.00	544.79	2.19	545.30	36.02	545.81	112.95
544.29	0.00	544.80	2.49	545.31	37.16	545.82	114.79
544.30	0.00	544.81	2.82	545.32	38.33	545.83	116.65
544.31	0.00	544.82	3.15	545.33	39.51	545.84	118.53
544.32	0.00	544.83	3.50	545.34	40.71	545.85	120.41
544.33	0.00	544.84	3.87	545.35	41.92	545.86	122.31
544.34	0.00	544.85	4.24	545.36	43.15	545.87	124.22
544.35	0.00	544.86	4.63	545.37	44.40	545.88	126.14
544.36	0.00	544.87	5.03	545.38	45.66	545.89	128.07
544.37	0.00	544.88	5.44	545.39	46.93	545.90	130.02
544.38	0.00	544.89	5.86	545.40	48.22	545.91	131.98
544.39	0.00	544.90	6.29	545.41	49.53	545.92	133.94
544.40	0.00	544.91	6.74	545.42	50.84	545.93	135.93
544.41	0.00	544.92	7.19	545.43	52.18	545.94	137.92
544.42	0.00	544.93	7.66	545.44	53.53	545.95	139.92
544.43	0.00	544.94	8.13	545.45	54.89	545.96	141.94
544.44	0.00	544.95	8.62	545.46	56.27	545.97	143.97
544.45	0.00	544.96	9.12	545.47	57.66	545.98	146.01
544.46	0.00	544.97	9.63	545.48	59.07	545.99	148.06
544.47	0.00	544.98	10.14	545.49	60.49	546.00	**150.12**
544.48	0.00	544.99	10.67	545.50	61.92		
544.49	0.00	545.00	11.21	545.51	63.37		
544.50	0.00	545.01	11.76	545.52	64.83		

Stage-Area-Storage for Pond 27P: Basin 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
544.00	26,023	0	545.02	28,485	27,799
544.02	26,071	521	545.04	28,533	28,369
544.04	26,120	1,043	545.06	28,581	28,940
544.06	26,168	1,566	545.08	28,630	29,512
544.08	26,216	2,090	545.10	28,678	30,085
544.10	26,264	2,614	545.12	28,726	30,660
544.12	26,313	3,140	545.14	28,774	31,235
544.14	26,361	3,667	545.16	28,823	31,810
544.16	26,409	4,195	545.18	28,871	32,387
544.18	26,457	4,723	545.20	28,919	32,965
544.20	26,506	5,253	545.22	28,967	33,544
544.22	26,554	5,783	545.24	29,016	34,124
544.24	26,602	6,315	545.26	29,064	34,705
544.26	26,651	6,848	545.28	29,112	35,287
544.28	26,699	7,381	545.30	29,161	35,869
544.30	26,747	7,916	545.32	29,209	36,453
544.32	26,795	8,451	545.34	29,257	37,038
544.34	26,844	8,987	545.36	29,305	37,623
544.36	26,892	9,525	545.38	29,354	38,210
544.38	26,940	10,063	545.40	29,402	38,797
544.40	26,988	10,602	545.42	29,450	39,386
544.42	27,037	11,143	545.44	29,498	39,975
544.44	27,085	11,684	545.46	29,547	40,566
544.46	27,133	12,226	545.48	29,595	41,157
544.48	27,181	12,769	545.50	29,643	41,750
544.50	27,230	13,313	545.52	29,692	42,343
544.52	27,278	13,858	545.54	29,740	42,937
544.54	27,326	14,404	545.56	29,788	43,533
544.56	27,375	14,951	545.58	29,836	44,129
544.58	27,423	15,499	545.60	29,885	44,726
544.60	27,471	16,048	545.62	29,933	45,324
544.62	27,519	16,598	545.64	29,981	45,923
544.64	27,568	17,149	545.66	30,029	46,524
544.66	27,616	17,701	545.68	30,078	47,125
544.68	27,664	18,254	545.70	30,126	47,727
544.70	27,712	18,807	545.72	30,174	48,330
544.72	27,761	19,362	545.74	30,222	48,934
544.74	27,809	19,918	545.76	30,271	49,539
544.76	27,857	20,474	545.78	30,319	50,144
544.78	27,906	21,032	545.80	30,367	50,751
544.80	27,954	21,591	545.82	30,416	51,359
544.82	28,002	22,150	545.84	30,464	51,968
544.84	28,050	22,711	545.86	30,512	52,578
544.86	28,099	23,272	545.88	30,560	53,188
544.88	28,147	23,835	545.90	30,609	53,800
544.90	28,195	24,398	545.92	30,657	54,413
544.92	28,243	24,963	545.94	30,705	55,026
544.94	28,292	25,528	545.96	30,753	55,641
544.96	28,340	26,094	545.98	30,802	56,256
544.98	28,388	26,662	546.00	**30,850**	**56,873**
545.00	28,437	27,230			

Summary for Pond 33P: Basin 11

Inflow Area = 84,693 sf, 77.02% Impervious, Inflow Depth = 7.78" for 100-Year event
Inflow = 13.28 cfs @ 12.17 hrs, Volume= 54,918 cf
Outflow = 10.88 cfs @ 12.24 hrs, Volume= 54,918 cf, Atten= 18%, Lag= 4.1 min
Discarded = 3.13 cfs @ 11.84 hrs, Volume= 45,948 cf
Primary = 7.75 cfs @ 12.24 hrs, Volume= 8,970 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 590.72' @ 12.24 hrs Surf.Area= 13,504 sf Storage= 3,879 cf

Plug-Flow detention time= 2.5 min calculated for 54,890 cf (100% of inflow)
Center-of-Mass det. time= 2.5 min (760.0 - 757.5)

Volume	Invert	Avail.Storage	Storage Description
#1	590.00'	13,072 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 32,680 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
590.00	13,504	0	0
591.00	13,504	13,504	13,504
592.00	13,504	13,504	27,008
592.42	13,504	5,672	32,680

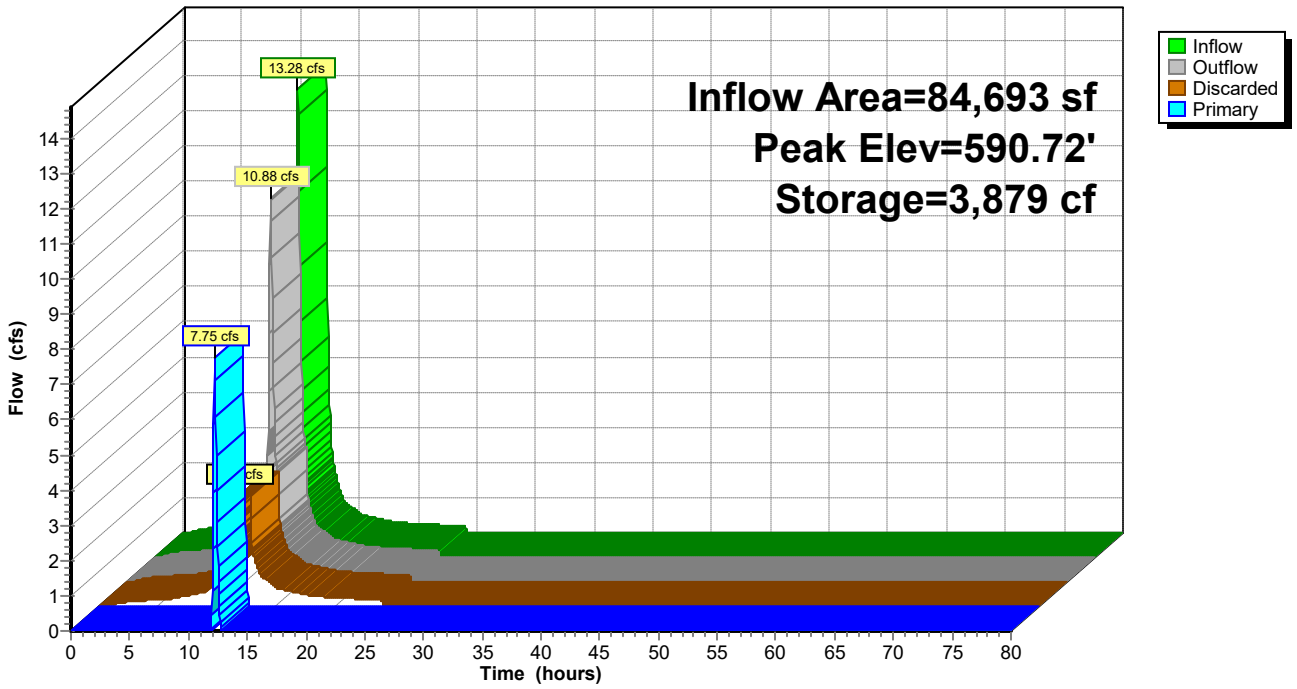
Device	Routing	Invert	Outlet Devices
#1	Primary	590.10'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	590.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=3.13 cfs @ 11.84 hrs HW=590.03' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 3.13 cfs)

Primary OutFlow Max=7.70 cfs @ 12.24 hrs HW=590.72' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 7.70 cfs @ 2.57 fps)

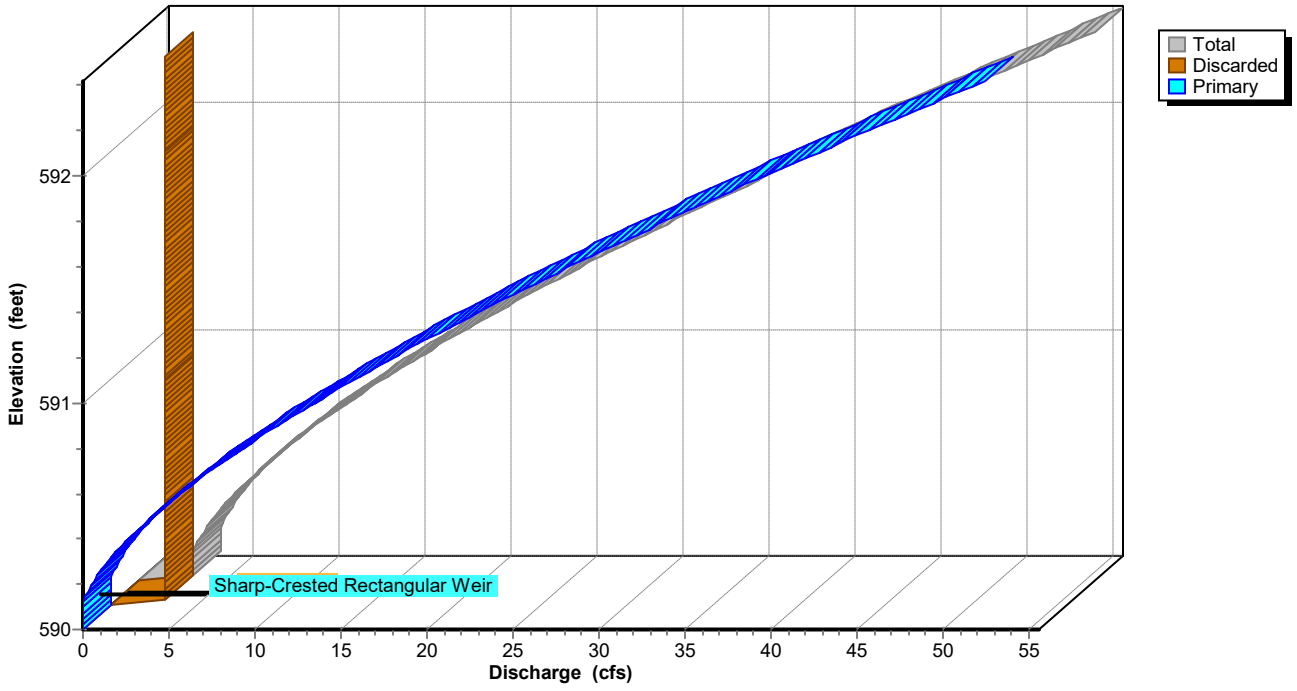
Pond 33P: Basin 11

Hydrograph



Pond 33P: Basin 11

Stage-Discharge



Hydrograph for Pond 33P: Basin 11

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	590.00	0.00	0.00	0.00
2.00	0.11	5	590.00	0.11	0.11	0.00
4.00	0.18	7	590.00	0.18	0.18	0.00
6.00	0.22	9	590.00	0.22	0.22	0.00
8.00	0.35	15	590.00	0.35	0.35	0.00
10.00	0.65	27	590.01	0.65	**0.65**	0.00
12.00	**6.38**	**1,021**	**590.19**	**3.56**	**3.13**	**0.43**
14.00	**0.82**	**35**	**590.01**	**0.83**	0.83	**0.00**
16.00	0.45	19	590.00	0.45	0.45	0.00
18.00	0.31	13	590.00	0.31	0.31	0.00
20.00	0.26	11	590.00	0.26	0.26	0.00
22.00	0.22	9	590.00	0.22	0.22	0.00
24.00	0.18	8	590.00	0.18	0.18	0.00
26.00	0.00	0	590.00	0.00	0.00	0.00
28.00	0.00	0	590.00	0.00	0.00	0.00
30.00	0.00	0	590.00	0.00	0.00	0.00
32.00	0.00	0	590.00	0.00	0.00	0.00
34.00	0.00	0	590.00	0.00	0.00	0.00
36.00	0.00	0	590.00	0.00	0.00	0.00
38.00	0.00	0	590.00	0.00	0.00	0.00
40.00	0.00	0	590.00	0.00	0.00	0.00
42.00	0.00	0	590.00	0.00	0.00	0.00
44.00	0.00	0	590.00	0.00	0.00	0.00
46.00	0.00	0	590.00	0.00	0.00	0.00
48.00	0.00	0	590.00	0.00	0.00	0.00
50.00	0.00	0	590.00	0.00	0.00	0.00
52.00	0.00	0	590.00	0.00	0.00	0.00
54.00	0.00	0	590.00	0.00	0.00	0.00
56.00	0.00	0	590.00	0.00	0.00	0.00
58.00	0.00	0	590.00	0.00	0.00	0.00
60.00	0.00	0	590.00	0.00	0.00	0.00
62.00	0.00	0	590.00	0.00	0.00	0.00
64.00	0.00	0	590.00	0.00	0.00	0.00
66.00	0.00	0	590.00	0.00	0.00	0.00
68.00	0.00	0	590.00	0.00	0.00	0.00
70.00	0.00	0	590.00	0.00	0.00	0.00
72.00	0.00	0	590.00	0.00	0.00	0.00
74.00	0.00	0	590.00	0.00	0.00	0.00
76.00	0.00	0	590.00	0.00	0.00	0.00
78.00	0.00	0	590.00	0.00	0.00	0.00
80.00	0.00	0	590.00	0.00	0.00	0.00

Stage-Discharge for Pond 33P: Basin 11

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
590.00	0.00	**0.00**	0.00
590.05	3.13	**3.13**	0.00
590.10	3.13	3.13	0.00
590.15	3.31	3.13	0.18
590.20	3.64	3.13	0.51
590.25	4.07	3.13	0.94
590.30	4.58	3.13	1.45
590.35	5.15	3.13	2.02
590.40	5.78	3.13	2.65
590.45	6.46	3.13	3.34
590.50	7.20	3.13	4.07
590.55	7.97	3.13	4.85
590.60	8.79	3.13	5.66
590.65	9.65	3.13	6.52
590.70	10.54	3.13	7.42
590.75	11.47	3.13	8.35
590.80	12.43	3.13	9.31
590.85	13.43	3.13	10.30
590.90	14.45	3.13	11.32
590.95	15.50	3.13	12.38
591.00	16.58	3.13	13.46
591.05	17.69	3.13	14.56
591.10	18.82	3.13	15.70
591.15	19.98	3.13	16.85
591.20	21.16	3.13	18.03
591.25	22.36	3.13	19.24
591.30	23.59	3.13	20.46
591.35	24.83	3.13	21.71
591.40	26.10	3.13	22.97
591.45	27.39	3.13	24.26
591.50	28.69	3.13	25.57
591.55	30.02	3.13	26.89
591.60	31.36	3.13	28.23
591.65	32.72	3.13	29.59
591.70	34.10	3.13	30.97
591.75	35.49	3.13	32.37
591.80	36.90	3.13	33.78
591.85	38.33	3.13	35.20
591.90	39.77	3.13	36.64
591.95	41.22	3.13	38.10
592.00	42.69	3.13	39.57
592.05	44.17	3.13	41.05
592.10	45.67	3.13	42.55
592.15	47.18	3.13	44.05
592.20	48.70	3.13	45.58
592.25	50.24	3.13	47.11
592.30	51.78	3.13	48.66
592.35	53.34	3.13	50.21
592.40	**54.91**	3.13	**51.78**

Stage-Area-Storage for Pond 33P: Basin 11

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
590.00	**13,504**	0
590.05	13,504	270
590.10	13,504	540
590.15	13,504	810
590.20	13,504	1,080
590.25	13,504	1,350
590.30	13,504	1,620
590.35	13,504	1,891
590.40	13,504	2,161
590.45	13,504	2,431
590.50	13,504	2,701
590.55	13,504	2,971
590.60	13,504	3,241
590.65	13,504	3,511
590.70	13,504	3,781
590.75	13,504	4,051
590.80	13,504	4,321
590.85	13,504	4,591
590.90	13,504	4,861
590.95	13,504	5,132
591.00	13,504	5,402
591.05	13,504	5,672
591.10	13,504	5,942
591.15	13,504	6,212
591.20	13,504	6,482
591.25	13,504	6,752
591.30	13,504	7,022
591.35	13,504	7,292
591.40	13,504	7,562
591.45	13,504	7,832
591.50	13,504	8,102
591.55	13,504	8,372
591.60	13,504	8,643
591.65	13,504	8,913
591.70	13,504	9,183
591.75	13,504	9,453
591.80	13,504	9,723
591.85	13,504	9,993
591.90	13,504	10,263
591.95	13,504	10,533
592.00	13,504	10,803
592.05	13,504	11,073
592.10	13,504	11,343
592.15	13,504	11,613
592.20	13,504	11,884
592.25	13,504	12,154
592.30	13,504	12,424
592.35	13,504	12,694
592.40	13,504	**12,964**

Summary for Pond 41P: Basin 10

Inflow Area = 97,058 sf, 61.64% Impervious, Inflow Depth = 7.35" for 100-Year event
Inflow = 14.24 cfs @ 12.18 hrs, Volume= 59,478 cf
Outflow = 13.47 cfs @ 12.21 hrs, Volume= 59,478 cf, Atten= 5%, Lag= 2.1 min
Discarded = 2.22 cfs @ 11.64 hrs, Volume= 45,419 cf
Primary = 11.25 cfs @ 12.21 hrs, Volume= 14,059 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 576.39' @ 12.21 hrs Surf.Area= 9,583 sf Storage= 3,699 cf

Plug-Flow detention time= 4.4 min calculated for 59,449 cf (100% of inflow)
Center-of-Mass det. time= 4.4 min (772.6 - 768.2)

Volume	Invert	Avail.Storage	Storage Description
#1	576.00'	28,749 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
576.00	9,583	0	0
577.00	9,583	9,583	9,583
578.00	9,583	9,583	19,166
579.00	9,583	9,583	28,749

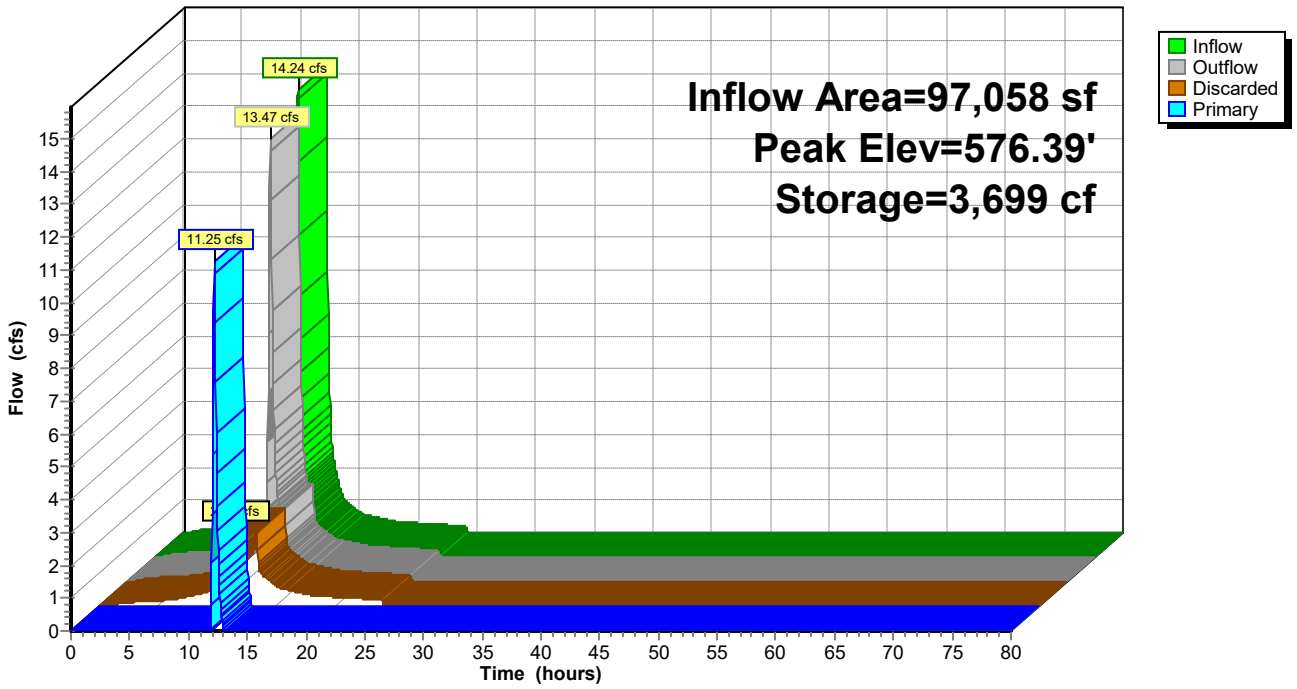
Device	Routing	Invert	Outlet Devices
#1	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	576.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=2.22 cfs @ 11.64 hrs HW=576.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 2.22 cfs)

Primary OutFlow Max=11.05 cfs @ 12.21 hrs HW=576.38' (Free Discharge)
├**1=Grate** (Weir Controls 5.53 cfs @ 1.58 fps)
└**2=Grate** (Weir Controls 5.53 cfs @ 1.58 fps)

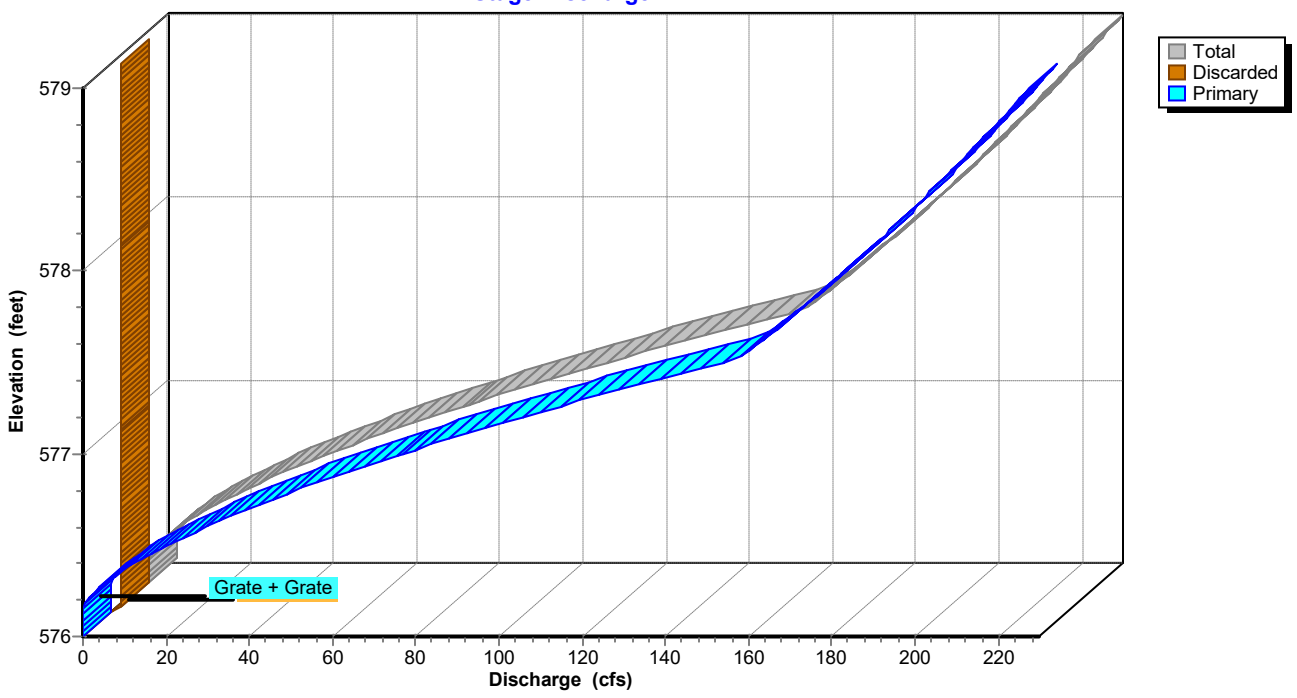
Pond 41P: Basin 10

Hydrograph



Pond 41P: Basin 10

Stage-Discharge



Hydrograph for Pond 41P: Basin 10

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	576.00	0.00	0.00	0.00
2.00	0.10	13	576.00	0.10	0.10	0.00
4.00	0.16	21	576.00	0.16	0.16	0.00
6.00	0.20	26	576.00	0.20	0.20	0.00
8.00	0.34	44	576.00	0.34	0.34	0.00
10.00	0.67	85	576.01	0.66	**0.66**	0.00
12.00	**6.59**	**2,161**	**576.23**	**4.28**	**2.22**	**2.07**
14.00	**0.93**	**122**	**576.01**	**0.94**	0.94	**0.00**
16.00	0.51	67	576.01	0.51	0.51	0.00
18.00	0.35	45	576.00	0.35	0.35	0.00
20.00	0.29	38	576.00	0.29	0.29	0.00
22.00	0.25	32	576.00	0.25	0.25	0.00
24.00	0.21	27	576.00	0.21	0.21	0.00
26.00	0.00	0	576.00	0.00	0.00	0.00
28.00	0.00	0	576.00	0.00	0.00	0.00
30.00	0.00	0	576.00	0.00	0.00	0.00
32.00	0.00	0	576.00	0.00	0.00	0.00
34.00	0.00	0	576.00	0.00	0.00	0.00
36.00	0.00	0	576.00	0.00	0.00	0.00
38.00	0.00	0	576.00	0.00	0.00	0.00
40.00	0.00	0	576.00	0.00	0.00	0.00
42.00	0.00	0	576.00	0.00	0.00	0.00
44.00	0.00	0	576.00	0.00	0.00	0.00
46.00	0.00	0	576.00	0.00	0.00	0.00
48.00	0.00	0	576.00	0.00	0.00	0.00
50.00	0.00	0	576.00	0.00	0.00	0.00
52.00	0.00	0	576.00	0.00	0.00	0.00
54.00	0.00	0	576.00	0.00	0.00	0.00
56.00	0.00	0	576.00	0.00	0.00	0.00
58.00	0.00	0	576.00	0.00	0.00	0.00
60.00	0.00	0	576.00	0.00	0.00	0.00
62.00	0.00	0	576.00	0.00	0.00	0.00
64.00	0.00	0	576.00	0.00	0.00	0.00
66.00	0.00	0	576.00	0.00	0.00	0.00
68.00	0.00	0	576.00	0.00	0.00	0.00
70.00	0.00	0	576.00	0.00	0.00	0.00
72.00	0.00	0	576.00	0.00	0.00	0.00
74.00	0.00	0	576.00	0.00	0.00	0.00
76.00	0.00	0	576.00	0.00	0.00	0.00
78.00	0.00	0	576.00	0.00	0.00	0.00
80.00	0.00	0	576.00	0.00	0.00	0.00

Stage-Discharge for Pond 41P: Basin 10

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
576.00	0.00	**0.00**	0.00
576.05	2.22	**2.22**	0.00
576.10	2.22	2.22	0.00
576.15	2.22	2.22	0.00
576.20	3.32	2.22	1.10
576.25	5.32	2.22	3.10
576.30	7.92	2.22	5.70
576.35	10.99	2.22	8.77
576.40	14.48	2.22	12.26
576.45	18.34	2.22	16.12
576.50	22.53	2.22	20.31
576.55	27.04	2.22	24.82
576.60	31.83	2.22	29.61
576.65	36.90	2.22	34.68
576.70	42.23	2.22	40.01
576.75	47.81	2.22	45.59
576.80	53.63	2.22	51.41
576.85	59.67	2.22	57.45
576.90	65.94	2.22	63.72
576.95	72.41	2.22	70.19
577.00	79.10	2.22	76.88
577.05	85.98	2.22	83.76
577.10	93.05	2.22	90.84
577.15	100.32	2.22	98.10
577.20	107.77	2.22	105.55
577.25	115.40	2.22	113.18
577.30	123.20	2.22	120.98
577.35	131.17	2.22	128.96
577.40	139.32	2.22	137.10
577.45	147.62	2.22	145.41
577.50	156.09	2.22	153.88
577.55	161.74	2.22	159.52
577.60	164.56	2.22	162.34
577.65	167.34	2.22	165.12
577.70	170.07	2.22	167.85
577.75	172.75	2.22	170.53
577.80	175.40	2.22	173.18
577.85	178.00	2.22	175.78
577.90	180.57	2.22	178.35
577.95	183.10	2.22	180.88
578.00	185.59	2.22	183.37
578.05	188.05	2.22	185.84
578.10	190.48	2.22	188.26
578.15	192.88	2.22	190.66
578.20	195.25	2.22	193.03
578.25	197.59	2.22	195.37
578.30	199.90	2.22	197.68
578.35	202.19	2.22	199.97
578.40	204.45	2.22	202.23
578.45	206.68	2.22	204.46
578.50	208.89	2.22	206.67
578.55	211.08	2.22	208.86
578.60	213.24	2.22	211.03
578.65	215.39	2.22	213.17
578.70	217.51	2.22	215.29
578.75	219.61	2.22	217.39
578.80	221.69	2.22	219.47
578.85	223.75	2.22	221.53
578.90	225.79	2.22	223.57
578.95	227.81	2.22	225.60
579.00	**229.82**	2.22	**227.60**

Stage-Area-Storage for Pond 41P: Basin 10

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
576.00	**9,583**	0
576.05	9,583	479
576.10	9,583	958
576.15	9,583	1,437
576.20	9,583	1,917
576.25	9,583	2,396
576.30	9,583	2,875
576.35	9,583	3,354
576.40	9,583	3,833
576.45	9,583	4,312
576.50	9,583	4,792
576.55	9,583	5,271
576.60	9,583	5,750
576.65	9,583	6,229
576.70	9,583	6,708
576.75	9,583	7,187
576.80	9,583	7,666
576.85	9,583	8,146
576.90	9,583	8,625
576.95	9,583	9,104
577.00	9,583	9,583
577.05	9,583	10,062
577.10	9,583	10,541
577.15	9,583	11,020
577.20	9,583	11,500
577.25	9,583	11,979
577.30	9,583	12,458
577.35	9,583	12,937
577.40	9,583	13,416
577.45	9,583	13,895
577.50	9,583	14,375
577.55	9,583	14,854
577.60	9,583	15,333
577.65	9,583	15,812
577.70	9,583	16,291
577.75	9,583	16,770
577.80	9,583	17,249
577.85	9,583	17,729
577.90	9,583	18,208
577.95	9,583	18,687
578.00	9,583	19,166
578.05	9,583	19,645
578.10	9,583	20,124
578.15	9,583	20,603
578.20	9,583	21,083
578.25	9,583	21,562
578.30	9,583	22,041
578.35	9,583	22,520
578.40	9,583	22,999
578.45	9,583	23,478
578.50	9,583	23,958
578.55	9,583	24,437
578.60	9,583	24,916
578.65	9,583	25,395
578.70	9,583	25,874
578.75	9,583	26,353
578.80	9,583	26,832
578.85	9,583	27,312
578.90	9,583	27,791
578.95	9,583	28,270
579.00	9,583	**28,749**

Summary for Pond 42P: Basin 9

Inflow Area = 25,049 sf, 64.41% Impervious, Inflow Depth = 7.56" for 100-Year event
Inflow = 4.19 cfs @ 12.14 hrs, Volume= 15,781 cf
Outflow = 0.74 cfs @ 12.62 hrs, Volume= 15,781 cf, Atten= 82%, Lag= 28.5 min
Discarded = 0.61 cfs @ 11.60 hrs, Volume= 15,235 cf
Primary = 0.14 cfs @ 12.62 hrs, Volume= 546 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 563.47' @ 12.62 hrs Surf.Area= 6,534 sf Storage= 3,837 cf

Plug-Flow detention time= 33.0 min calculated for 15,773 cf (100% of inflow)
Center-of-Mass det. time= 32.9 min (795.2 - 762.2)

Volume	Invert	Avail.Storage	Storage Description
#1	562.00'	6,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 15,812 cf Overall x 40.0% Voids

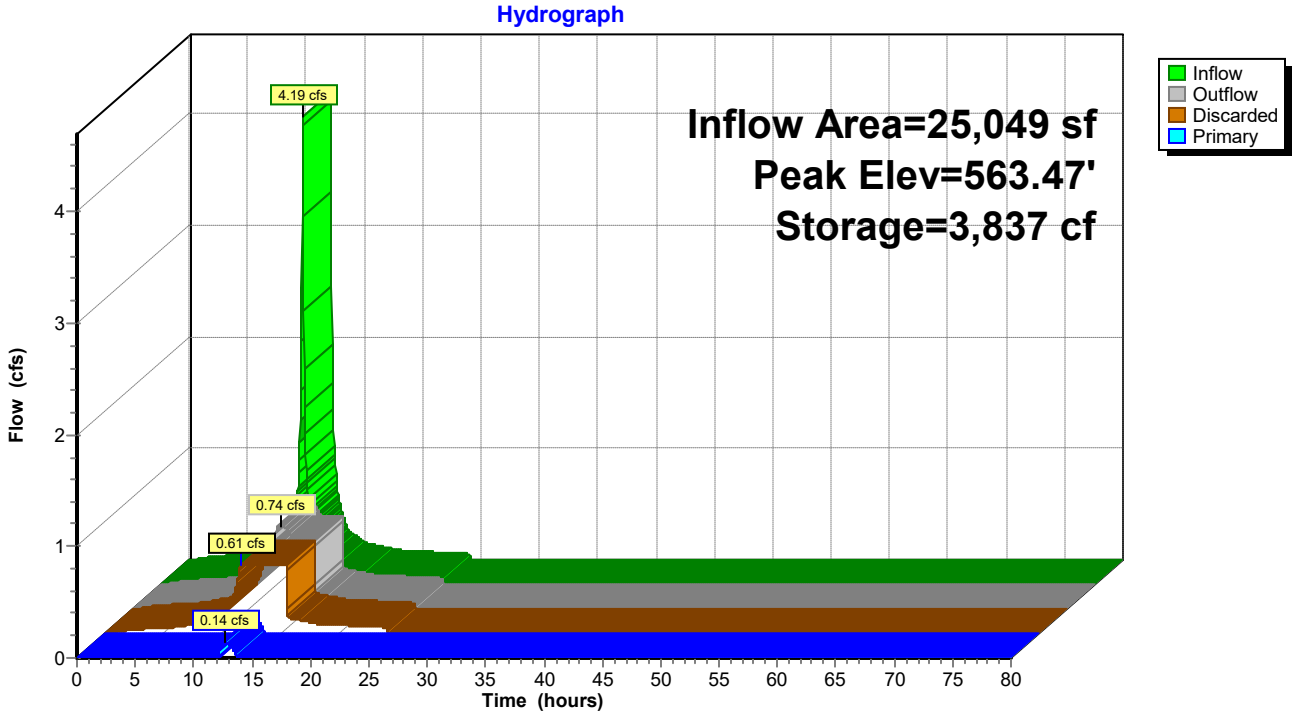
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
562.00	6,534	0	0
563.00	6,534	6,534	6,534
564.00	6,534	6,534	13,068
564.42	6,534	2,744	15,812

Device	Routing	Invert	Outlet Devices
#1	Primary	564.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	563.00'	**3.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	562.00'	**4.000 in/hr Exfiltration over Surface area**

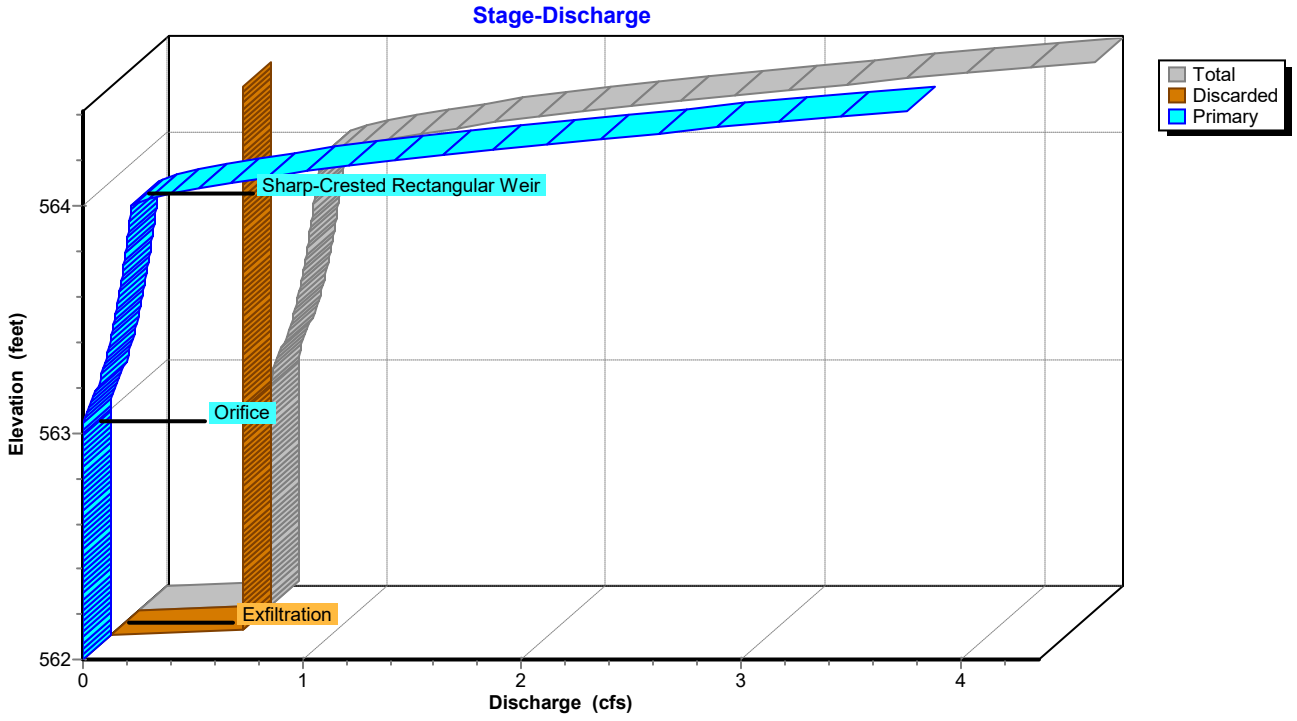
Discarded OutFlow Max=0.61 cfs @ 11.60 hrs HW=562.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.61 cfs)

Primary OutFlow Max=0.14 cfs @ 12.62 hrs HW=563.47' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Orifice Controls 0.14 cfs @ 2.82 fps)

Pond 42P: Basin 9



Pond 42P: Basin 9



Hydrograph for Pond 42P: Basin 9

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	562.00	0.00	0.00	0.00
2.00	0.03	3	562.00	0.03	0.03	0.00
4.00	0.04	5	562.00	0.04	0.04	0.00
6.00	0.06	6	562.00	0.06	0.06	0.00
8.00	0.10	10	562.00	0.10	0.10	0.00
10.00	0.19	19	562.01	0.18	**0.18**	0.00
12.00	**2.18**	**825**	**562.32**	**0.61**	**0.61**	**0.00**
14.00	**0.24**	**2,430**	**562.93**	**0.61**	0.61	**0.00**
16.00	0.13	14	562.01	0.13	0.13	0.00
18.00	0.09	9	562.00	0.09	0.09	0.00
20.00	0.08	8	562.00	0.08	0.08	0.00
22.00	0.06	7	562.00	0.07	0.07	0.00
24.00	0.05	6	562.00	0.05	0.05	0.00
26.00	0.00	0	562.00	0.00	0.00	0.00
28.00	0.00	0	562.00	0.00	0.00	0.00
30.00	0.00	0	562.00	0.00	0.00	0.00
32.00	0.00	0	562.00	0.00	0.00	0.00
34.00	0.00	0	562.00	0.00	0.00	0.00
36.00	0.00	0	562.00	0.00	0.00	0.00
38.00	0.00	0	562.00	0.00	0.00	0.00
40.00	0.00	0	562.00	0.00	0.00	0.00
42.00	0.00	0	562.00	0.00	0.00	0.00
44.00	0.00	0	562.00	0.00	0.00	0.00
46.00	0.00	0	562.00	0.00	0.00	0.00
48.00	0.00	0	562.00	0.00	0.00	0.00
50.00	0.00	0	562.00	0.00	0.00	0.00
52.00	0.00	0	562.00	0.00	0.00	0.00
54.00	0.00	0	562.00	0.00	0.00	0.00
56.00	0.00	0	562.00	0.00	0.00	0.00
58.00	0.00	0	562.00	0.00	0.00	0.00
60.00	0.00	0	562.00	0.00	0.00	0.00
62.00	0.00	0	562.00	0.00	0.00	0.00
64.00	0.00	0	562.00	0.00	0.00	0.00
66.00	0.00	0	562.00	0.00	0.00	0.00
68.00	0.00	0	562.00	0.00	0.00	0.00
70.00	0.00	0	562.00	0.00	0.00	0.00
72.00	0.00	0	562.00	0.00	0.00	0.00
74.00	0.00	0	562.00	0.00	0.00	0.00
76.00	0.00	0	562.00	0.00	0.00	0.00
78.00	0.00	0	562.00	0.00	0.00	0.00
80.00	0.00	0	562.00	0.00	0.00	0.00

Stage-Discharge for Pond 42P: Basin 9

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
562.00	0.00	**0.00**	0.00
562.05	0.61	**0.61**	0.00
562.10	0.61	0.61	0.00
562.15	0.61	0.61	0.00
562.20	0.61	0.61	0.00
562.25	0.61	0.61	0.00
562.30	0.61	0.61	0.00
562.35	0.61	0.61	0.00
562.40	0.61	0.61	0.00
562.45	0.61	0.61	0.00
562.50	0.61	0.61	0.00
562.55	0.61	0.61	0.00
562.60	0.61	0.61	0.00
562.65	0.61	0.61	0.00
562.70	0.61	0.61	0.00
562.75	0.61	0.61	0.00
562.80	0.61	0.61	0.00
562.85	0.61	0.61	0.00
562.90	0.61	0.61	0.00
562.95	0.61	0.61	0.00
563.00	0.61	0.61	0.00
563.05	0.61	0.61	0.01
563.10	0.62	0.61	0.02
563.15	0.65	0.61	0.04
563.20	0.67	0.61	0.06
563.25	0.69	0.61	0.08
563.30	0.70	0.61	0.10
563.35	0.72	0.61	0.11
563.40	0.73	0.61	0.12
563.45	0.74	0.61	0.13
563.50	0.75	0.61	0.14
563.55	0.76	0.61	0.15
563.60	0.77	0.61	0.16
563.65	0.78	0.61	0.17
563.70	0.78	0.61	0.18
563.75	0.79	0.61	0.19
563.80	0.80	0.61	0.19
563.85	0.81	0.61	0.20
563.90	0.81	0.61	0.21
563.95	0.82	0.61	0.21
564.00	0.83	0.61	0.22
564.05	0.98	0.61	0.37
564.10	1.25	0.61	0.64
564.15	1.60	0.61	0.99
564.20	2.01	0.61	1.40
564.25	2.47	0.61	1.87
564.30	2.98	0.61	2.37
564.35	3.53	0.61	2.92
564.40	**4.11**	0.61	**3.51**

Stage-Area-Storage for Pond 42P: Basin 9

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
562.00	**6,534**	0
562.05	6,534	131
562.10	6,534	261
562.15	6,534	392
562.20	6,534	523
562.25	6,534	653
562.30	6,534	784
562.35	6,534	915
562.40	6,534	1,045
562.45	6,534	1,176
562.50	6,534	1,307
562.55	6,534	1,437
562.60	6,534	1,568
562.65	6,534	1,699
562.70	6,534	1,830
562.75	6,534	1,960
562.80	6,534	2,091
562.85	6,534	2,222
562.90	6,534	2,352
562.95	6,534	2,483
563.00	6,534	2,614
563.05	6,534	2,744
563.10	6,534	2,875
563.15	6,534	3,006
563.20	6,534	3,136
563.25	6,534	3,267
563.30	6,534	3,398
563.35	6,534	3,528
563.40	6,534	3,659
563.45	6,534	3,790
563.50	6,534	3,920
563.55	6,534	4,051
563.60	6,534	4,182
563.65	6,534	4,312
563.70	6,534	4,443
563.75	6,534	4,574
563.80	6,534	4,704
563.85	6,534	4,835
563.90	6,534	4,966
563.95	6,534	5,097
564.00	6,534	5,227
564.05	6,534	5,358
564.10	6,534	5,489
564.15	6,534	5,619
564.20	6,534	5,750
564.25	6,534	5,881
564.30	6,534	6,011
564.35	6,534	6,142
564.40	6,534	**6,273**

Summary for Pond 48P: Basin 8

Inflow Area = 62,190 sf, 63.36% Impervious, Inflow Depth = 7.49" for 100-Year event
Inflow = 9.98 cfs @ 12.16 hrs, Volume= 38,819 cf
Outflow = 3.83 cfs @ 12.35 hrs, Volume= 38,819 cf, Atten= 62%, Lag= 12.0 min
Discarded = 0.93 cfs @ 11.16 hrs, Volume= 29,544 cf
Primary = 2.90 cfs @ 12.35 hrs, Volume= 9,275 cf
Routed to Pond 49P : Basin 7

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 575.26' @ 12.35 hrs Surf.Area= 10,019 sf Storage= 9,061 cf

Plug-Flow detention time= 28.9 min calculated for 38,819 cf (100% of inflow)
Center-of-Mass det. time= 28.9 min (793.3 - 764.4)

Volume	Invert	Avail.Storage	Storage Description
#1	573.00'	12,023 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 30,057 cf Overall x 40.0% Voids

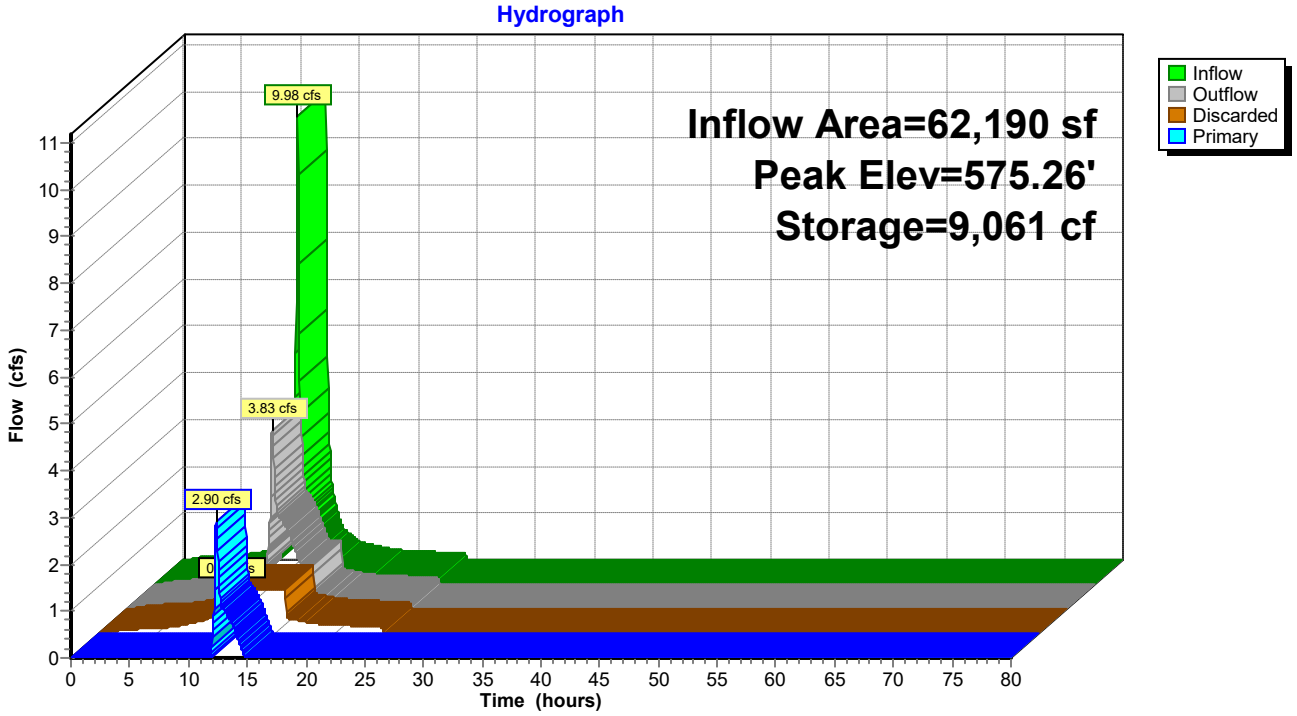
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
573.00	10,019	0	0
574.00	10,019	10,019	10,019
575.00	10,019	10,019	20,038
576.00	10,019	10,019	30,057

Device	Routing	Invert	Outlet Devices
#1	Primary	575.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	573.45'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	573.00'	**4.000 in/hr Exfiltration over Surface area**

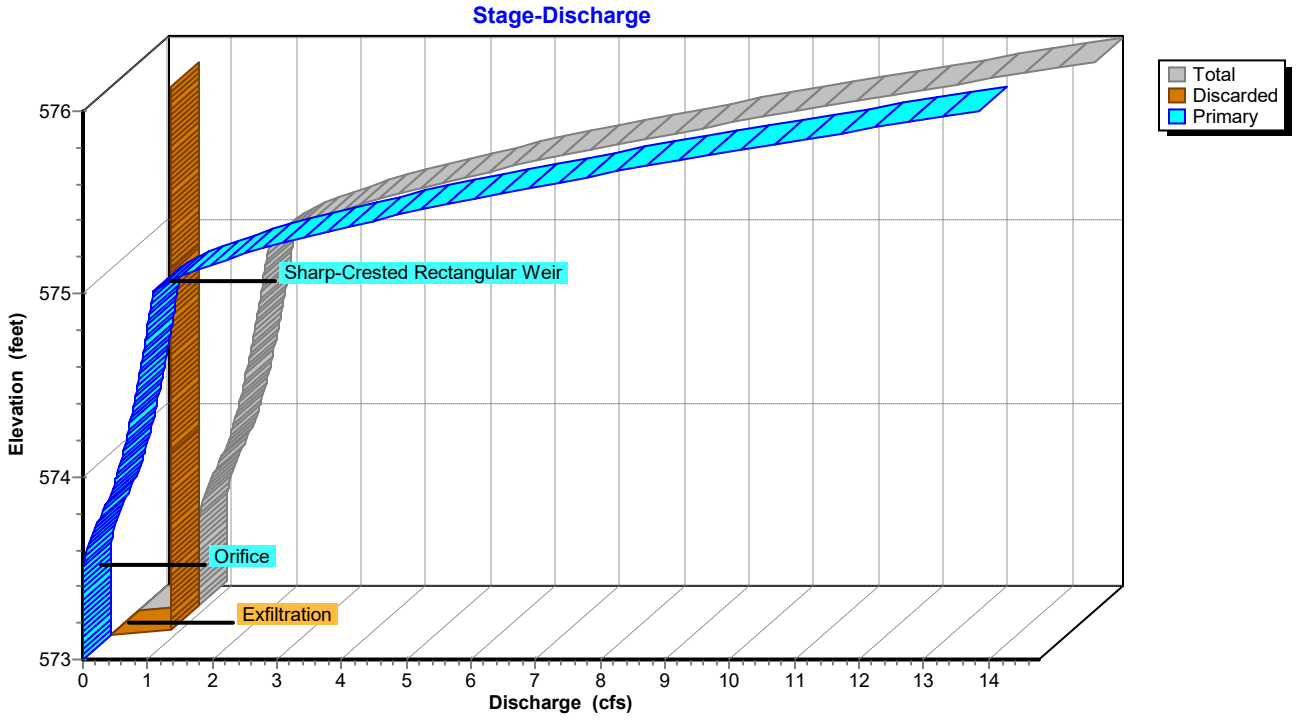
Discarded OutFlow Max=0.93 cfs @ 11.16 hrs HW=573.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.93 cfs)

Primary OutFlow Max=2.89 cfs @ 12.35 hrs HW=575.26' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Weir Controls 1.71 cfs @ 1.67 fps)
└**2=Orifice** (Orifice Controls 1.18 cfs @ 6.01 fps)

Pond 48P: Basin 8



Pond 48P: Basin 8



Hydrograph for Pond 48P: Basin 8

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	573.00	0.00	0.00	0.00
2.00	0.07	9	573.00	0.07	0.07	0.00
4.00	0.11	14	573.00	0.11	0.11	0.00
6.00	0.14	18	573.00	0.14	0.14	0.00
8.00	0.23	30	573.01	0.23	0.23	0.00
10.00	0.45	57	573.01	0.44	**0.44**	0.00
12.00	**4.92**	**3,025**	**573.75**	**1.16**	**0.93**	**0.24**
14.00	**0.59**	**4,222**	**574.05**	**1.49**	0.93	**0.56**
16.00	0.33	44	573.01	0.34	0.34	0.00
18.00	0.22	29	573.01	0.22	0.22	0.00
20.00	0.19	24	573.01	0.19	0.19	0.00
22.00	0.16	21	573.01	0.16	0.16	0.00
24.00	0.13	17	573.00	0.13	0.13	0.00
26.00	0.00	0	573.00	0.00	0.00	0.00
28.00	0.00	0	573.00	0.00	0.00	0.00
30.00	0.00	0	573.00	0.00	0.00	0.00
32.00	0.00	0	573.00	0.00	0.00	0.00
34.00	0.00	0	573.00	0.00	0.00	0.00
36.00	0.00	0	573.00	0.00	0.00	0.00
38.00	0.00	0	573.00	0.00	0.00	0.00
40.00	0.00	0	573.00	0.00	0.00	0.00
42.00	0.00	0	573.00	0.00	0.00	0.00
44.00	0.00	0	573.00	0.00	0.00	0.00
46.00	0.00	0	573.00	0.00	0.00	0.00
48.00	0.00	0	573.00	0.00	0.00	0.00
50.00	0.00	0	573.00	0.00	0.00	0.00
52.00	0.00	0	573.00	0.00	0.00	0.00
54.00	0.00	0	573.00	0.00	0.00	0.00
56.00	0.00	0	573.00	0.00	0.00	0.00
58.00	0.00	0	573.00	0.00	0.00	0.00
60.00	0.00	0	573.00	0.00	0.00	0.00
62.00	0.00	0	573.00	0.00	0.00	0.00
64.00	0.00	0	573.00	0.00	0.00	0.00
66.00	0.00	0	573.00	0.00	0.00	0.00
68.00	0.00	0	573.00	0.00	0.00	0.00
70.00	0.00	0	573.00	0.00	0.00	0.00
72.00	0.00	0	573.00	0.00	0.00	0.00
74.00	0.00	0	573.00	0.00	0.00	0.00
76.00	0.00	0	573.00	0.00	0.00	0.00
78.00	0.00	0	573.00	0.00	0.00	0.00
80.00	0.00	0	573.00	0.00	0.00	0.00

Stage-Discharge for Pond 48P: Basin 8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
573.00	0.00	**0.00**	0.00
573.05	0.93	**0.93**	0.00
573.10	0.93	0.93	0.00
573.15	0.93	0.93	0.00
573.20	0.93	0.93	0.00
573.25	0.93	0.93	0.00
573.30	0.93	0.93	0.00
573.35	0.93	0.93	0.00
573.40	0.93	0.93	0.00
573.45	0.93	0.93	0.00
573.50	0.94	0.93	0.01
573.55	0.96	0.93	0.03
573.60	0.99	0.93	0.07
573.65	1.04	0.93	0.11
573.70	1.09	0.93	0.17
573.75	1.16	0.93	0.23
573.80	1.22	0.93	0.30
573.85	1.29	0.93	0.36
573.90	1.35	0.93	0.43
573.95	1.40	0.93	0.47
574.00	1.45	0.93	0.52
574.05	1.49	0.93	0.56
574.10	1.53	0.93	0.60
574.15	1.56	0.93	0.63
574.20	1.60	0.93	0.67
574.25	1.63	0.93	0.70
574.30	1.66	0.93	0.73
574.35	1.69	0.93	0.76
574.40	1.72	0.93	0.79
574.45	1.75	0.93	0.82
574.50	1.77	0.93	0.85
574.55	1.80	0.93	0.87
574.60	1.82	0.93	0.90
574.65	1.85	0.93	0.92
574.70	1.87	0.93	0.95
574.75	1.90	0.93	0.97
574.80	1.92	0.93	0.99
574.85	1.94	0.93	1.01
574.90	1.96	0.93	1.04
574.95	1.98	0.93	1.06
575.00	2.01	0.93	1.08
575.05	2.17	0.93	1.24
575.10	2.46	0.93	1.53
575.15	2.82	0.93	1.89
575.20	3.24	0.93	2.32
575.25	3.72	0.93	2.79
575.30	4.24	0.93	3.31
575.35	4.80	0.93	3.88
575.40	5.40	0.93	4.48
575.45	6.04	0.93	5.11
575.50	6.70	0.93	5.78
575.55	7.40	0.93	6.47
575.60	8.13	0.93	7.20
575.65	8.88	0.93	7.95
575.70	9.66	0.93	8.73
575.75	10.46	0.93	9.53
575.80	11.28	0.93	10.35
575.85	12.13	0.93	11.20
575.90	13.00	0.93	12.07
575.95	13.88	0.93	12.95
576.00	**14.79**	0.93	**13.86**

Stage-Area-Storage for Pond 48P: Basin 8

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
573.00	**10,019**	0
573.05	10,019	200
573.10	10,019	401
573.15	10,019	601
573.20	10,019	802
573.25	10,019	1,002
573.30	10,019	1,202
573.35	10,019	1,403
573.40	10,019	1,603
573.45	10,019	1,803
573.50	10,019	2,004
573.55	10,019	2,204
573.60	10,019	2,405
573.65	10,019	2,605
573.70	10,019	2,805
573.75	10,019	3,006
573.80	10,019	3,206
573.85	10,019	3,406
573.90	10,019	3,607
573.95	10,019	3,807
574.00	10,019	4,008
574.05	10,019	4,208
574.10	10,019	4,408
574.15	10,019	4,609
574.20	10,019	4,809
574.25	10,019	5,010
574.30	10,019	5,210
574.35	10,019	5,410
574.40	10,019	5,611
574.45	10,019	5,811
574.50	10,019	6,011
574.55	10,019	6,212
574.60	10,019	6,412
574.65	10,019	6,613
574.70	10,019	6,813
574.75	10,019	7,013
574.80	10,019	7,214
574.85	10,019	7,414
574.90	10,019	7,614
574.95	10,019	7,815
575.00	10,019	8,015
575.05	10,019	8,216
575.10	10,019	8,416
575.15	10,019	8,616
575.20	10,019	8,817
575.25	10,019	9,017
575.30	10,019	9,217
575.35	10,019	9,418
575.40	10,019	9,618
575.45	10,019	9,819
575.50	10,019	10,019
575.55	10,019	10,219
575.60	10,019	10,420
575.65	10,019	10,620
575.70	10,019	10,821
575.75	10,019	11,021
575.80	10,019	11,221
575.85	10,019	11,422
575.90	10,019	11,622
575.95	10,019	11,822
576.00	10,019	**12,023**

Summary for Pond 49P: Basin 7

Inflow Area = 169,079 sf, 50.99% Impervious, Inflow Depth = 5.08" for 100-Year event
Inflow = 15.55 cfs @ 12.21 hrs, Volume= 71,574 cf
Outflow = 4.01 cfs @ 12.76 hrs, Volume= 65,796 cf, Atten= 74%, Lag= 33.1 min
Primary = 4.01 cfs @ 12.76 hrs, Volume= 65,796 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 533.01' @ 12.76 hrs Surf.Area= 17,871 sf Storage= 32,345 cf

Plug-Flow detention time= 219.0 min calculated for 65,796 cf (92% of inflow)
Center-of-Mass det. time= 176.0 min (957.0 - 781.0)

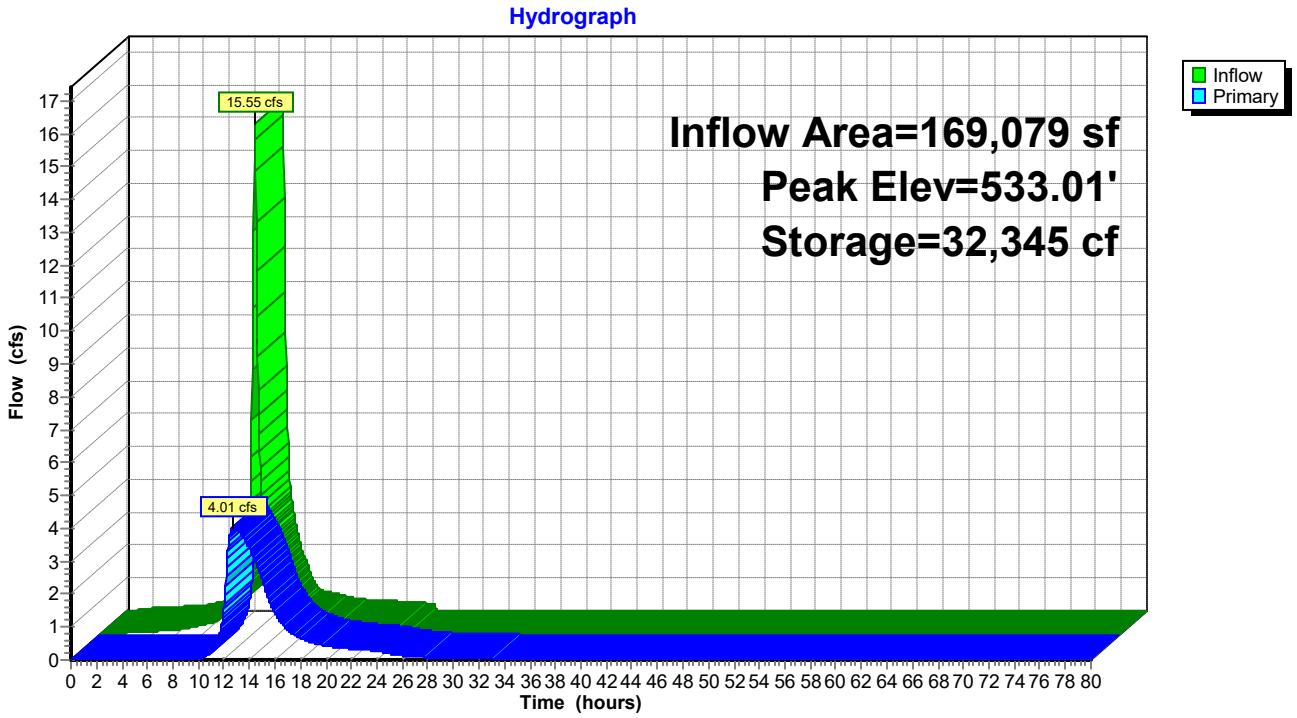
Volume	Invert	Avail.Storage	Storage Description
#1	531.00'	50,966 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
531.00	14,375	0	0
532.00	16,117	15,246	15,246
533.00	17,860	16,989	32,235
534.00	19,602	18,731	50,966

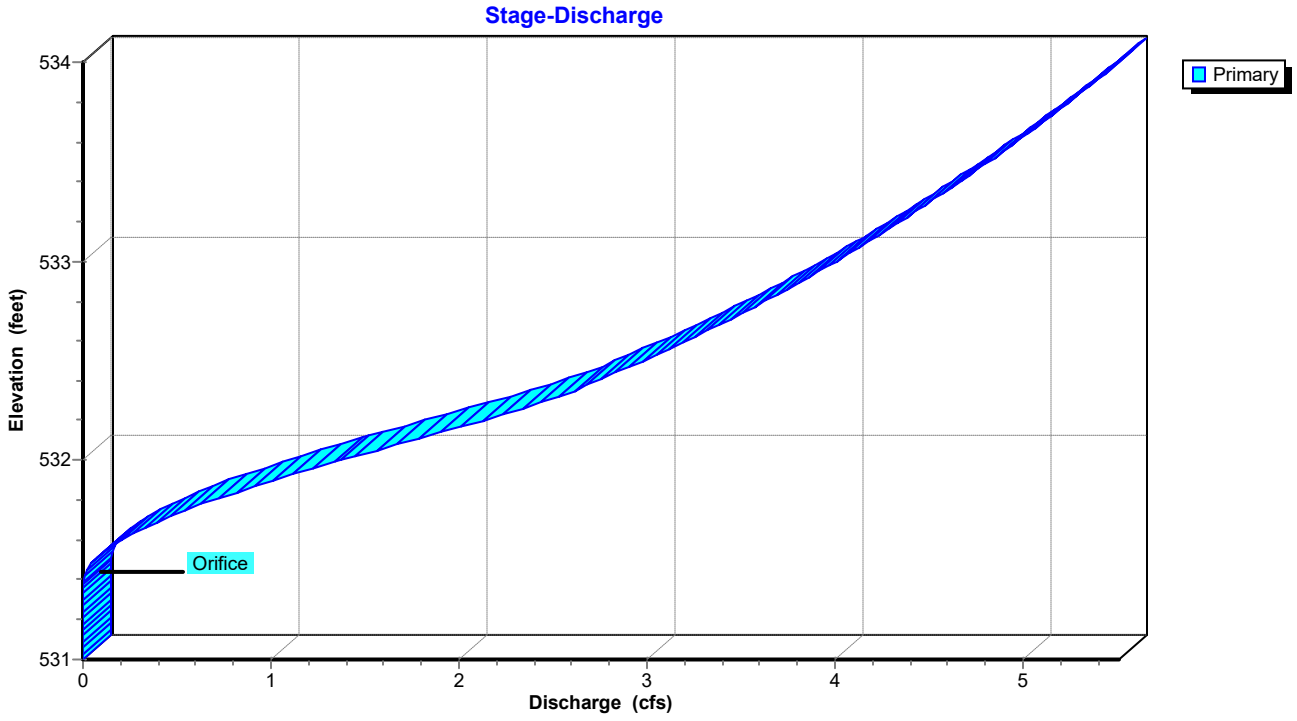
Device	Routing	Invert	Outlet Devices
#1	Primary	531.38'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.01 cfs @ 12.76 hrs HW=533.01' (Free Discharge)
1=Orifice (Orifice Controls 4.01 cfs @ 5.11 fps)

Pond 49P: Basin 7



Pond 49P: Basin 7



Hydrograph for Pond 49P: Basin 7

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	531.00	0.00
2.00	0.08	236	531.02	0.00
4.00	0.13	992	531.07	0.00
6.00	0.17	2,022	531.14	0.00
8.00	0.32	3,726	531.26	0.00
10.00	0.65	6,863	531.46	0.03
12.00	**6.55**	**15,938**	**532.04**	**1.53**
14.00	**1.58**	**26,692**	**532.68**	**3.39**
16.00	0.56	15,443	532.01	1.42
18.00	0.38	11,919	531.79	0.67
20.00	0.32	10,583	531.71	0.43
22.00	0.27	9,970	531.67	0.34
24.00	0.23	9,550	531.64	0.28
26.00	0.00	8,262	531.56	0.13
28.00	0.00	7,548	531.51	0.07
30.00	0.00	7,128	531.48	0.05
32.00	0.00	6,853	531.46	0.03
34.00	0.00	6,659	531.45	0.02
36.00	0.00	6,516	531.44	0.02
38.00	0.00	6,403	531.43	0.01
40.00	0.00	6,313	531.43	0.01
42.00	0.00	6,242	531.42	0.01
44.00	0.00	6,185	531.42	0.01
46.00	0.00	6,137	531.42	0.01
48.00	0.00	6,093	531.41	0.01
50.00	0.00	6,054	531.41	0.01
52.00	0.00	6,019	531.41	0.00
54.00	0.00	5,988	531.41	0.00
56.00	0.00	5,959	531.40	0.00
58.00	0.00	5,934	531.40	0.00
60.00	0.00	5,911	531.40	0.00
62.00	0.00	5,890	531.40	0.00
64.00	0.00	5,872	531.40	0.00
66.00	0.00	5,855	531.40	0.00
68.00	0.00	5,840	531.40	0.00
70.00	0.00	5,827	531.40	0.00
72.00	0.00	5,815	531.40	0.00
74.00	0.00	5,804	531.39	0.00
76.00	0.00	5,794	531.39	0.00
78.00	0.00	5,786	531.39	0.00
80.00	0.00	5,778	531.39	0.00

Stage-Discharge for Pond 49P: Basin 7

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
531.00	0.00	532.02	1.45	533.04	4.07
531.02	0.00	532.04	1.52	533.06	4.11
531.04	0.00	532.06	1.60	533.08	4.14
531.06	0.00	532.08	1.67	533.10	4.18
531.08	0.00	532.10	1.75	533.12	4.21
531.10	0.00	532.12	1.83	533.14	4.24
531.12	0.00	532.14	1.90	533.16	4.28
531.14	0.00	532.16	1.98	533.18	4.31
531.16	0.00	532.18	2.05	533.20	4.34
531.18	0.00	532.20	2.13	533.22	4.38
531.20	0.00	532.22	2.20	533.24	4.41
531.22	0.00	532.24	2.27	533.26	4.44
531.24	0.00	532.26	2.34	533.28	4.47
531.26	0.00	532.28	2.40	533.30	4.51
531.28	0.00	532.30	2.47	533.32	4.54
531.30	0.00	532.32	2.53	533.34	4.57
531.32	0.00	532.34	2.58	533.36	4.60
531.34	0.00	532.36	2.63	533.38	4.63
531.36	0.00	532.38	2.67	533.40	4.66
531.38	0.00	532.40	2.73	533.42	4.69
531.40	0.00	532.42	2.78	533.44	4.72
531.42	0.01	532.44	2.83	533.46	4.75
531.44	0.02	532.46	2.88	533.48	4.78
531.46	0.03	532.48	2.93	533.50	4.81
531.48	0.04	532.50	2.98	533.52	4.84
531.50	0.06	532.52	3.03	533.54	4.87
531.52	0.09	532.54	3.07	533.56	4.90
531.54	0.11	532.56	3.12	533.58	4.93
531.56	0.14	532.58	3.16	533.60	4.96
531.58	0.17	532.60	3.21	533.62	4.99
531.60	0.20	532.62	3.25	533.64	5.02
531.62	0.24	532.64	3.30	533.66	5.05
531.64	0.28	532.66	3.34	533.68	5.07
531.66	0.32	532.68	3.38	533.70	5.10
531.68	0.37	532.70	3.42	533.72	5.13
531.70	0.42	532.72	3.47	533.74	5.16
531.72	0.47	532.74	3.51	533.76	5.19
531.74	0.52	532.76	3.55	533.78	5.21
531.76	0.57	532.78	3.59	533.80	5.24
531.78	0.63	532.80	3.63	533.82	5.27
531.80	0.69	532.82	3.67	533.84	5.29
531.82	0.75	532.84	3.71	533.86	5.32
531.84	0.81	532.86	3.74	533.88	5.35
531.86	0.88	532.88	3.78	533.90	5.37
531.88	0.95	532.90	3.82	533.92	5.40
531.90	1.01	532.92	3.86	533.94	5.43
531.92	1.08	532.94	3.89	533.96	5.45
531.94	1.15	532.96	3.93	533.98	5.48
531.96	1.22	532.98	3.97	534.00	**5.51**
531.98	1.30	533.00	4.00		
532.00	1.37	533.02	4.04		

Stage-Area-Storage for Pond 49P: Basin 7

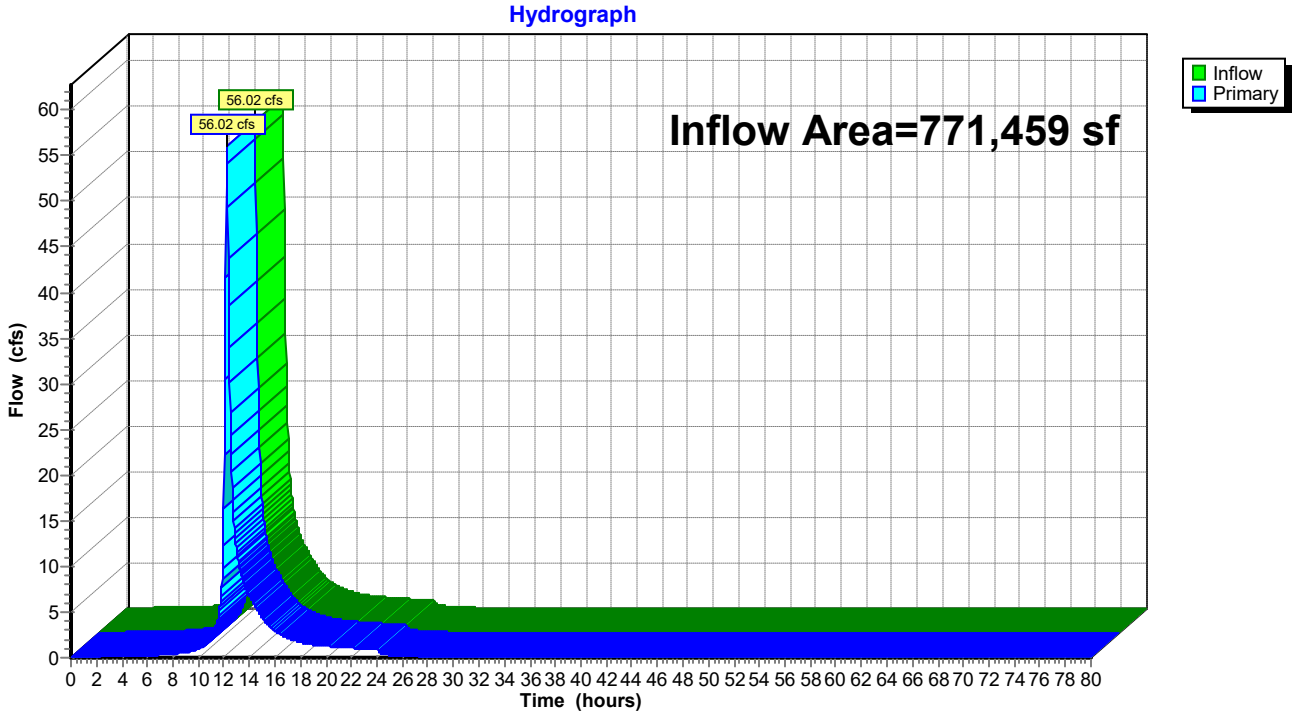
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
531.00	14,375	0
531.05	14,462	721
531.10	14,549	1,446
531.15	14,636	2,176
531.20	14,723	2,910
531.25	14,811	3,648
531.30	14,898	4,391
531.35	14,985	5,138
531.40	15,072	5,889
531.45	15,159	6,645
531.50	15,246	7,405
531.55	15,333	8,170
531.60	15,420	8,939
531.65	15,507	9,712
531.70	15,594	10,489
531.75	15,682	11,271
531.80	15,769	12,057
531.85	15,856	12,848
531.90	15,943	13,643
531.95	16,030	14,442
532.00	16,117	15,246
532.05	16,204	16,054
532.10	16,291	16,866
532.15	16,378	17,683
532.20	16,466	18,504
532.25	16,553	19,330
532.30	16,640	20,160
532.35	16,727	20,994
532.40	16,814	21,832
532.45	16,901	22,675
532.50	16,989	23,522
532.55	17,076	24,374
532.60	17,163	25,230
532.65	17,250	26,090
532.70	17,337	26,955
532.75	17,424	27,824
532.80	17,511	28,697
532.85	17,599	29,575
532.90	17,686	30,457
532.95	17,773	31,344
533.00	17,860	32,235
533.05	17,947	33,130
533.10	18,034	34,029
533.15	18,121	34,933
533.20	18,208	35,841
533.25	18,296	36,754
533.30	18,383	37,671
533.35	18,470	38,592
533.40	18,557	39,518
533.45	18,644	40,448
533.50	18,731	41,382
533.55	18,818	42,321
533.60	18,905	43,264
533.65	18,992	44,211
533.70	19,079	45,163
533.75	19,167	46,119
533.80	19,254	47,080
533.85	19,341	48,045
533.90	19,428	49,014
533.95	19,515	49,988
534.00	**19,602**	**50,966**

Summary for Link 28L: POA 2

Inflow Area = 771,459 sf, 50.89% Impervious, Inflow Depth = 3.78" for 100-Year event
Inflow = 56.02 cfs @ 12.21 hrs, Volume= 243,139 cf
Primary = 56.02 cfs @ 12.21 hrs, Volume= 243,139 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 28L: POA 2



Hydrograph for Link 28L: POA 2

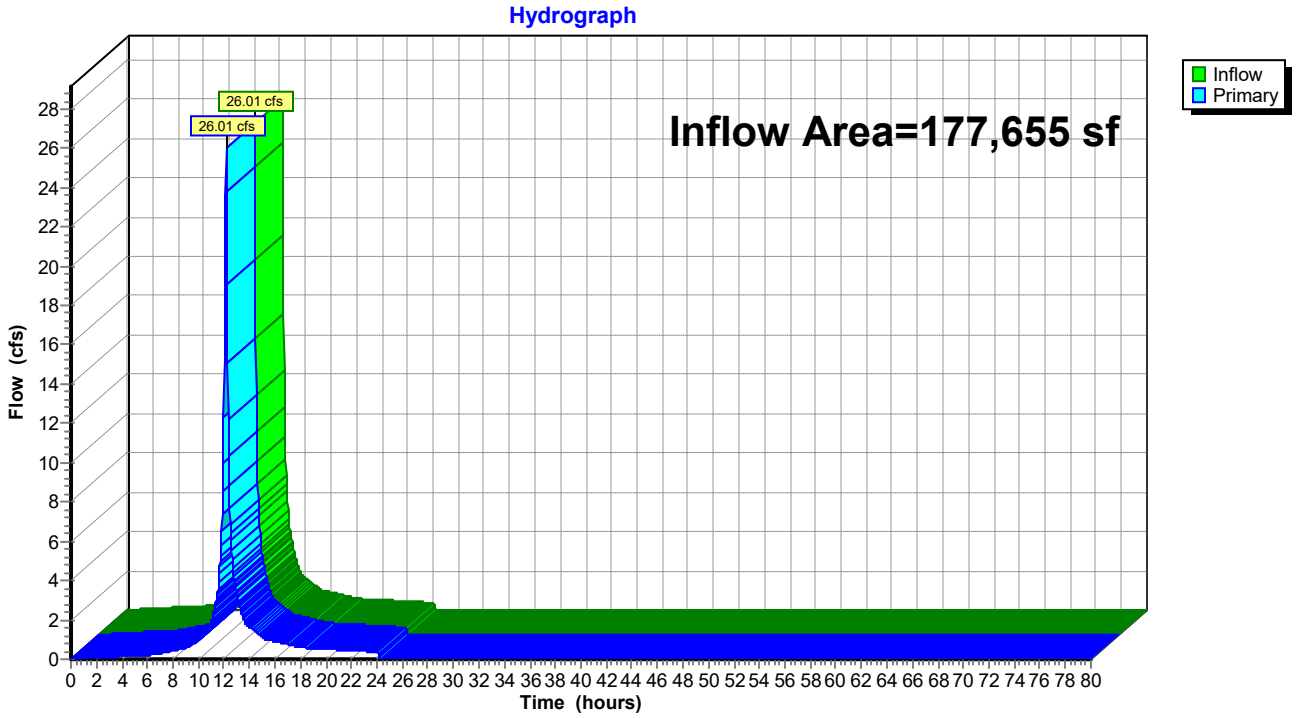
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.01	0.00	0.01
0.80	0.02	0.00	0.02	41.60	0.01	0.00	0.01
1.60	0.07	0.00	0.07	42.40	0.01	0.00	0.01
2.40	0.10	0.00	0.10	43.20	0.01	0.00	0.01
3.20	0.13	0.00	0.13	44.00	0.01	0.00	0.01
4.00	0.14	0.00	0.14	44.80	0.01	0.00	0.01
4.80	0.15	0.00	0.15	45.60	0.01	0.00	0.01
5.60	0.18	0.00	0.18	46.40	0.01	0.00	0.01
6.40	0.24	0.00	0.24	47.20	0.01	0.00	0.01
7.20	0.33	0.00	0.33	48.00	0.01	0.00	0.01
8.00	0.44	0.00	0.44	48.80	0.01	0.00	0.01
8.80	0.56	0.00	0.56	49.60	0.01	0.00	0.01
9.60	0.81	0.00	0.81	50.40	0.01	0.00	0.01
10.40	1.28	0.00	1.28	51.20	0.00	0.00	0.00
11.20	2.78	0.00	2.78	52.00	0.00	0.00	0.00
12.00	**16.37**	0.00	**16.37**	52.80	0.00	0.00	0.00
12.80	**14.14**	0.00	**14.14**	53.60	0.00	0.00	0.00
13.60	8.02	0.00	8.02	54.40	0.00	0.00	0.00
14.40	5.74	0.00	5.74	55.20	0.00	0.00	0.00
15.20	4.00	0.00	4.00	56.00	0.00	0.00	0.00
16.00	2.93	0.00	2.93	56.80	0.00	0.00	0.00
16.80	2.31	0.00	2.31	57.60	0.00	0.00	0.00
17.60	1.88	0.00	1.88	58.40	0.00	0.00	0.00
18.40	1.56	0.00	1.56	59.20	0.00	0.00	0.00
19.20	1.40	0.00	1.40	60.00	0.00	0.00	0.00
20.00	1.29	0.00	1.29	60.80	0.00	0.00	0.00
20.80	1.19	0.00	1.19	61.60	0.00	0.00	0.00
21.60	1.11	0.00	1.11	62.40	0.00	0.00	0.00
22.40	1.03	0.00	1.03	63.20	0.00	0.00	0.00
23.20	0.97	0.00	0.97	64.00	0.00	0.00	0.00
24.00	0.90	0.00	0.90	64.80	0.00	0.00	0.00
24.80	0.31	0.00	0.31	65.60	0.00	0.00	0.00
25.60	0.20	0.00	0.20	66.40	0.00	0.00	0.00
26.40	0.13	0.00	0.13	67.20	0.00	0.00	0.00
27.20	0.10	0.00	0.10	68.00	0.00	0.00	0.00
28.00	0.08	0.00	0.08	68.80	0.00	0.00	0.00
28.80	0.06	0.00	0.06	69.60	0.00	0.00	0.00
29.60	0.05	0.00	0.05	70.40	0.00	0.00	0.00
30.40	0.04	0.00	0.04	71.20	0.00	0.00	0.00
31.20	0.04	0.00	0.04	72.00	0.00	0.00	0.00
32.00	0.03	0.00	0.03	72.80	0.00	0.00	0.00
32.80	0.03	0.00	0.03	73.60	0.00	0.00	0.00
33.60	0.02	0.00	0.02	74.40	0.00	0.00	0.00
34.40	0.02	0.00	0.02	75.20	0.00	0.00	0.00
35.20	0.02	0.00	0.02	76.00	0.00	0.00	0.00
36.00	0.02	0.00	0.02	76.80	0.00	0.00	0.00
36.80	0.02	0.00	0.02	77.60	0.00	0.00	0.00
37.60	0.01	0.00	0.01	78.40	0.00	0.00	0.00
38.40	0.01	0.00	0.01	79.20	0.00	0.00	0.00
39.20	0.01	0.00	0.01	80.00	0.00	0.00	0.00
40.00	0.01	0.00	0.01				

Summary for Link 34L: DA 2 Undetained

Inflow Area = 177,655 sf, 29.56% Impervious, Inflow Depth = 6.63" for 100-Year event
Inflow = 26.01 cfs @ 12.16 hrs, Volume= 98,197 cf
Primary = 26.01 cfs @ 12.16 hrs, Volume= 98,197 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 28L : POA 2

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 34L: DA 2 Undetained



Hydrograph for Link 34L: DA 2 Undetained

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.00	0.00	0.00
0.80	0.02	0.00	0.02	41.60	0.00	0.00	0.00
1.60	0.07	0.00	0.07	42.40	0.00	0.00	0.00
2.40	0.10	0.00	0.10	43.20	0.00	0.00	0.00
3.20	0.13	0.00	0.13	44.00	0.00	0.00	0.00
4.00	0.14	0.00	0.14	44.80	0.00	0.00	0.00
4.80	0.15	0.00	0.15	45.60	0.00	0.00	0.00
5.60	0.18	0.00	0.18	46.40	0.00	0.00	0.00
6.40	0.24	0.00	0.24	47.20	0.00	0.00	0.00
7.20	0.33	0.00	0.33	48.00	0.00	0.00	0.00
8.00	0.44	0.00	0.44	48.80	0.00	0.00	0.00
8.80	0.56	0.00	0.56	49.60	0.00	0.00	0.00
9.60	0.81	0.00	0.81	50.40	0.00	0.00	0.00
10.40	1.18	0.00	1.18	51.20	0.00	0.00	0.00
11.20	2.41	0.00	2.41	52.00	0.00	0.00	0.00
12.00	**12.33**	0.00	**12.33**	52.80	0.00	0.00	0.00
12.80	**4.04**	0.00	**4.04**	53.60	0.00	0.00	0.00
13.60	1.97	0.00	1.97	54.40	0.00	0.00	0.00
14.40	1.44	0.00	1.44	55.20	0.00	0.00	0.00
15.20	1.03	0.00	1.03	56.00	0.00	0.00	0.00
16.00	0.91	0.00	0.91	56.80	0.00	0.00	0.00
16.80	0.79	0.00	0.79	57.60	0.00	0.00	0.00
17.60	0.67	0.00	0.67	58.40	0.00	0.00	0.00
18.40	0.58	0.00	0.58	59.20	0.00	0.00	0.00
19.20	0.55	0.00	0.55	60.00	0.00	0.00	0.00
20.00	0.52	0.00	0.52	60.80	0.00	0.00	0.00
20.80	0.49	0.00	0.49	61.60	0.00	0.00	0.00
21.60	0.46	0.00	0.46	62.40	0.00	0.00	0.00
22.40	0.43	0.00	0.43	63.20	0.00	0.00	0.00
23.20	0.40	0.00	0.40	64.00	0.00	0.00	0.00
24.00	0.37	0.00	0.37	64.80	0.00	0.00	0.00
24.80	0.00	0.00	0.00	65.60	0.00	0.00	0.00
25.60	0.00	0.00	0.00	66.40	0.00	0.00	0.00
26.40	0.00	0.00	0.00	67.20	0.00	0.00	0.00
27.20	0.00	0.00	0.00	68.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	68.80	0.00	0.00	0.00
28.80	0.00	0.00	0.00	69.60	0.00	0.00	0.00
29.60	0.00	0.00	0.00	70.40	0.00	0.00	0.00
30.40	0.00	0.00	0.00	71.20	0.00	0.00	0.00
31.20	0.00	0.00	0.00	72.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	72.80	0.00	0.00	0.00
32.80	0.00	0.00	0.00	73.60	0.00	0.00	0.00
33.60	0.00	0.00	0.00	74.40	0.00	0.00	0.00
34.40	0.00	0.00	0.00	75.20	0.00	0.00	0.00
35.20	0.00	0.00	0.00	76.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	76.80	0.00	0.00	0.00
36.80	0.00	0.00	0.00	77.60	0.00	0.00	0.00
37.60	0.00	0.00	0.00	78.40	0.00	0.00	0.00
38.40	0.00	0.00	0.00	79.20	0.00	0.00	0.00
39.20	0.00	0.00	0.00	80.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00				

Summary for Subcatchment 19S: Basin 3 - Imp

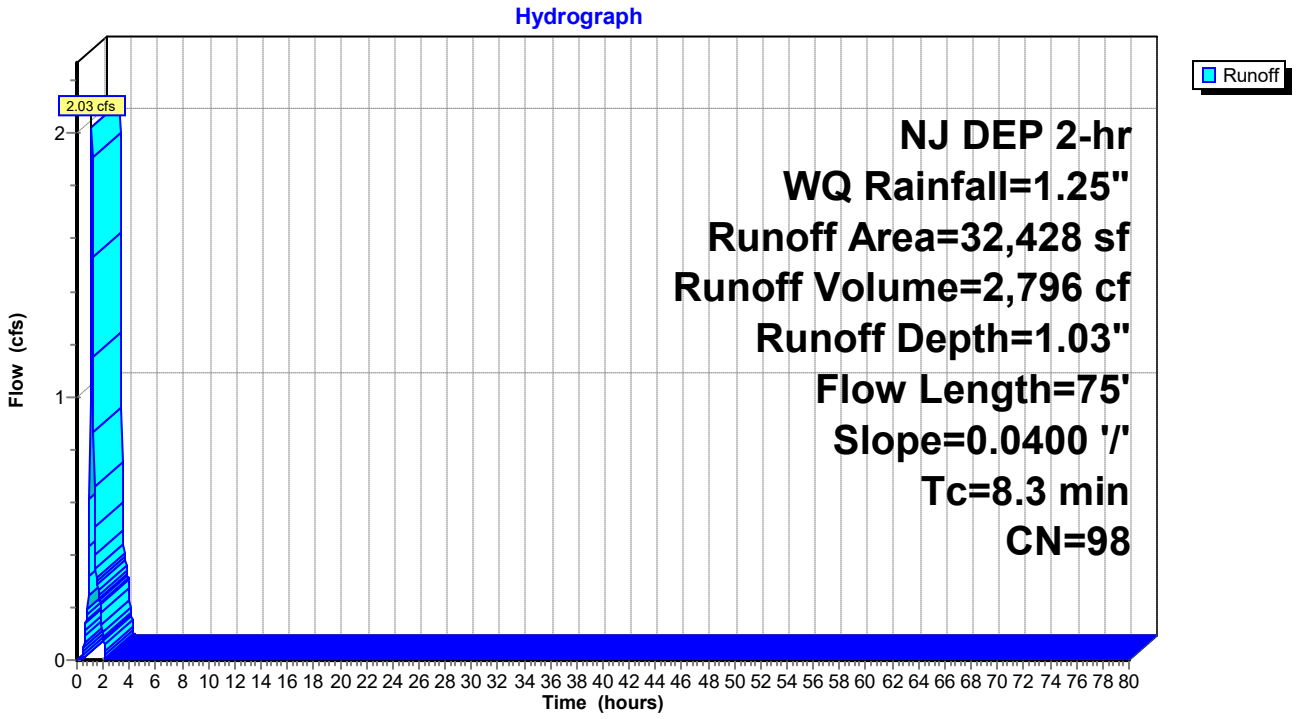
Runoff = 2.03 cfs @ 1.12 hrs, Volume= 2,796 cf, Depth= 1.03"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
18,295	98	Roofs, HSG C
7,163	98	Paved parking, HSG C
32,428	98	Weighted Average
32,428		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 19S: Basin 3 - Imp



Hydrograph for Subcatchment 19S: Basin 3 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.19**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.27**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 20S: Basin 3 - Perv

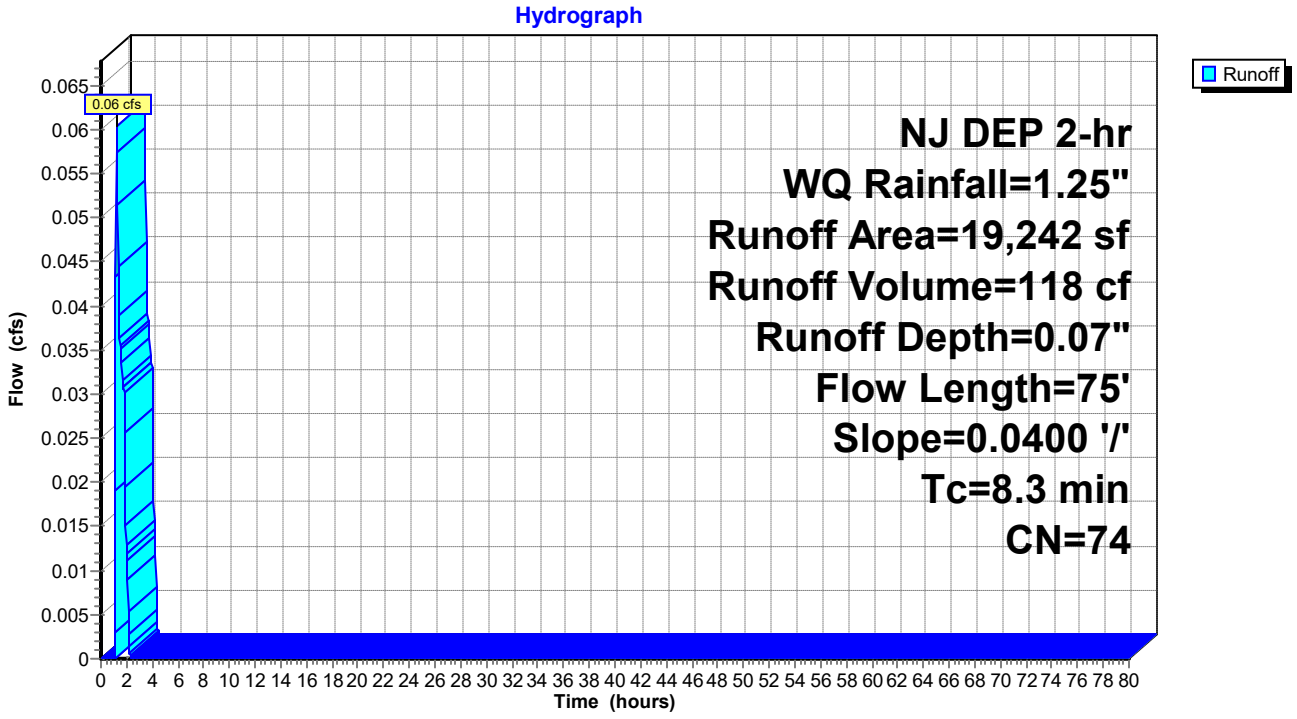
Runoff = 0.06 cfs @ 1.24 hrs, Volume= 118 cf, Depth= 0.07"
Routed to Pond 21P : Basin 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
19,242	74	>75% Grass cover, Good, HSG C
19,242		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	75	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"

Subcatchment 20S: Basin 3 - Perv



Hydrograph for Subcatchment 20S: Basin 3 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.07	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.07	0.00
1.60	**1.18**	**0.06**	**0.03**	42.40	1.25	0.07	0.00
2.40	**1.25**	**0.07**	0.00	43.20	1.25	0.07	0.00
3.20	1.25	0.07	0.00	44.00	1.25	0.07	0.00
4.00	1.25	0.07	0.00	44.80	1.25	0.07	0.00
4.80	1.25	0.07	0.00	45.60	1.25	0.07	0.00
5.60	1.25	0.07	0.00	46.40	1.25	0.07	0.00
6.40	1.25	0.07	0.00	47.20	1.25	0.07	0.00
7.20	1.25	0.07	0.00	48.00	1.25	0.07	0.00
8.00	1.25	0.07	0.00	48.80	1.25	0.07	0.00
8.80	1.25	0.07	0.00	49.60	1.25	0.07	0.00
9.60	1.25	0.07	0.00	50.40	1.25	0.07	0.00
10.40	1.25	0.07	0.00	51.20	1.25	0.07	0.00
11.20	1.25	0.07	0.00	52.00	1.25	0.07	0.00
12.00	1.25	0.07	0.00	52.80	1.25	0.07	0.00
12.80	1.25	0.07	0.00	53.60	1.25	0.07	0.00
13.60	1.25	0.07	0.00	54.40	1.25	0.07	0.00
14.40	1.25	0.07	0.00	55.20	1.25	0.07	0.00
15.20	1.25	0.07	0.00	56.00	1.25	0.07	0.00
16.00	1.25	0.07	0.00	56.80	1.25	0.07	0.00
16.80	1.25	0.07	0.00	57.60	1.25	0.07	0.00
17.60	1.25	0.07	0.00	58.40	1.25	0.07	0.00
18.40	1.25	0.07	0.00	59.20	1.25	0.07	0.00
19.20	1.25	0.07	0.00	60.00	1.25	0.07	0.00
20.00	1.25	0.07	0.00	60.80	1.25	0.07	0.00
20.80	1.25	0.07	0.00	61.60	1.25	0.07	0.00
21.60	1.25	0.07	0.00	62.40	1.25	0.07	0.00
22.40	1.25	0.07	0.00	63.20	1.25	0.07	0.00
23.20	1.25	0.07	0.00	64.00	1.25	0.07	0.00
24.00	1.25	0.07	0.00	64.80	1.25	0.07	0.00
24.80	1.25	0.07	0.00	65.60	1.25	0.07	0.00
25.60	1.25	0.07	0.00	66.40	1.25	0.07	0.00
26.40	1.25	0.07	0.00	67.20	1.25	0.07	0.00
27.20	1.25	0.07	0.00	68.00	1.25	0.07	0.00
28.00	1.25	0.07	0.00	68.80	1.25	0.07	0.00
28.80	1.25	0.07	0.00	69.60	1.25	0.07	0.00
29.60	1.25	0.07	0.00	70.40	1.25	0.07	0.00
30.40	1.25	0.07	0.00	71.20	1.25	0.07	0.00
31.20	1.25	0.07	0.00	72.00	1.25	0.07	0.00
32.00	1.25	0.07	0.00	72.80	1.25	0.07	0.00
32.80	1.25	0.07	0.00	73.60	1.25	0.07	0.00
33.60	1.25	0.07	0.00	74.40	1.25	0.07	0.00
34.40	1.25	0.07	0.00	75.20	1.25	0.07	0.00
35.20	1.25	0.07	0.00	76.00	1.25	0.07	0.00
36.00	1.25	0.07	0.00	76.80	1.25	0.07	0.00
36.80	1.25	0.07	0.00	77.60	1.25	0.07	0.00
37.60	1.25	0.07	0.00	78.40	1.25	0.07	0.00
38.40	1.25	0.07	0.00	79.20	1.25	0.07	0.00
39.20	1.25	0.07	0.00	80.00	1.25	0.07	0.00
40.00	1.25	0.07	0.00				

Summary for Subcatchment 21S: Basin 4 - Imp

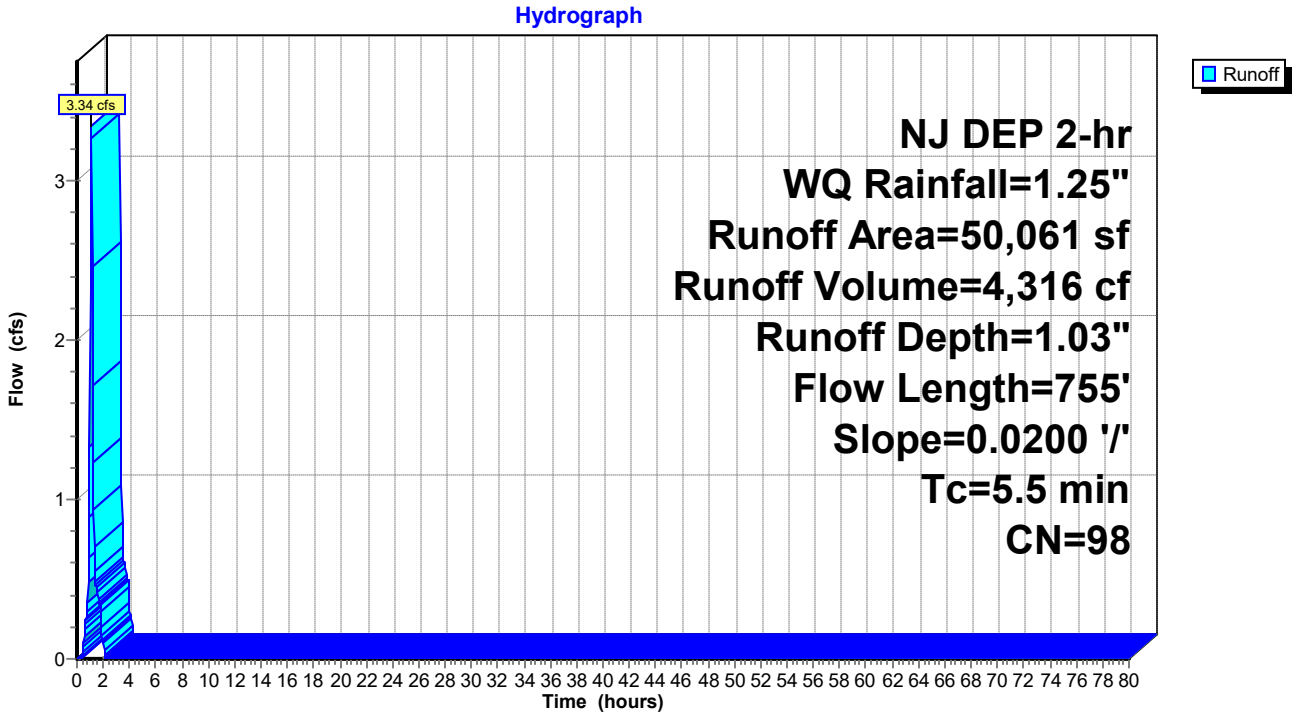
Runoff = 3.34 cfs @ 1.09 hrs, Volume= 4,316 cf, Depth= 1.03"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
6,970	98	Roofs, HSG D
43,091	98	Paved parking, HSG C
50,061	98	Weighted Average
50,061		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 21S: Basin 4 - Imp



Hydrograph for Subcatchment 21S: Basin 4 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.36**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.37**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 24S: Basin 4 - Perv

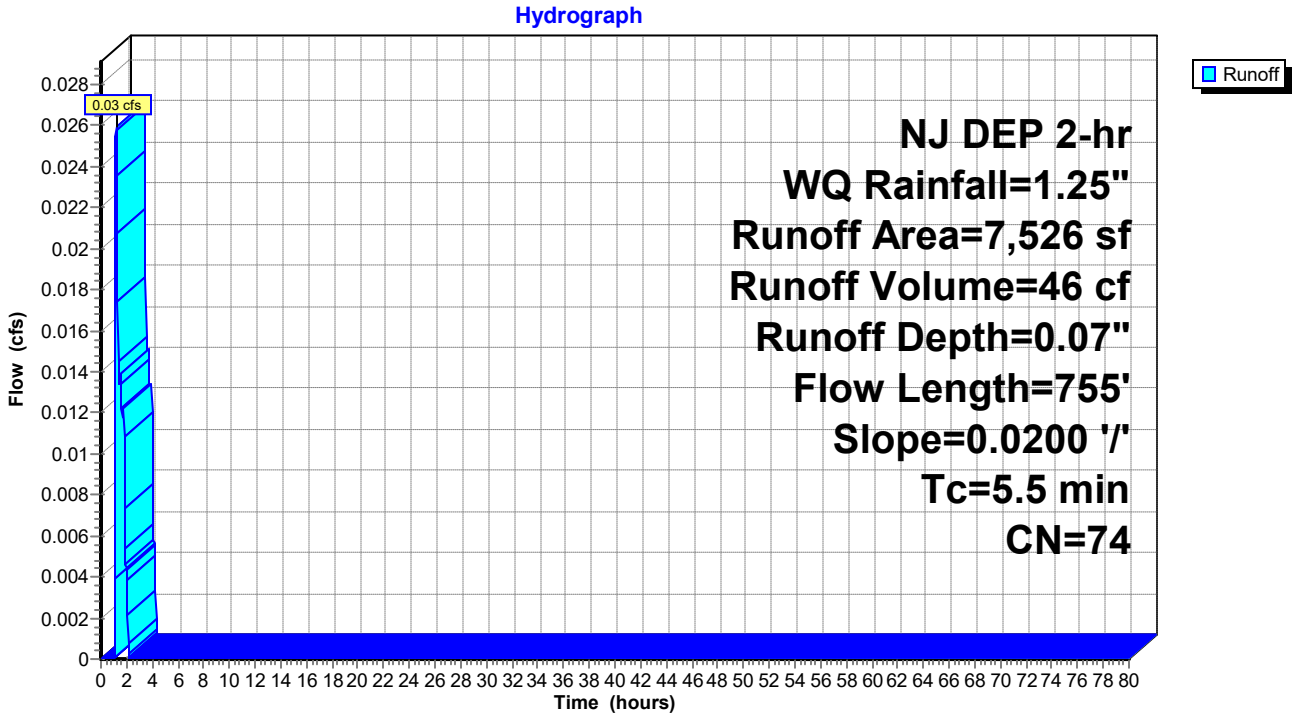
Runoff = 0.03 cfs @ 1.19 hrs, Volume= 46 cf, Depth= 0.07"
Routed to Pond 22P : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
7,526	74	>75% Grass cover, Good, HSG C
7,526		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.33		**Sheet Flow, Sheet Flow (A-B)** Smooth surfaces n= 0.011 P2= 3.47"
4.6	685		2.50		**Direct Entry, Pipe Flow (B-C)**
5.5	755	Total			

Subcatchment 24S: Basin 4 - Perv



Hydrograph for Subcatchment 24S: Basin 4 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.07	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.07	0.00
1.60	**1.18**	**0.06**	**0.01**	42.40	1.25	0.07	0.00
2.40	**1.25**	**0.07**	0.00	43.20	1.25	0.07	0.00
3.20	1.25	0.07	0.00	44.00	1.25	0.07	0.00
4.00	1.25	0.07	0.00	44.80	1.25	0.07	0.00
4.80	1.25	0.07	0.00	45.60	1.25	0.07	0.00
5.60	1.25	0.07	0.00	46.40	1.25	0.07	0.00
6.40	1.25	0.07	0.00	47.20	1.25	0.07	0.00
7.20	1.25	0.07	0.00	48.00	1.25	0.07	0.00
8.00	1.25	0.07	0.00	48.80	1.25	0.07	0.00
8.80	1.25	0.07	0.00	49.60	1.25	0.07	0.00
9.60	1.25	0.07	0.00	50.40	1.25	0.07	0.00
10.40	1.25	0.07	0.00	51.20	1.25	0.07	0.00
11.20	1.25	0.07	0.00	52.00	1.25	0.07	0.00
12.00	1.25	0.07	0.00	52.80	1.25	0.07	0.00
12.80	1.25	0.07	0.00	53.60	1.25	0.07	0.00
13.60	1.25	0.07	0.00	54.40	1.25	0.07	0.00
14.40	1.25	0.07	0.00	55.20	1.25	0.07	0.00
15.20	1.25	0.07	0.00	56.00	1.25	0.07	0.00
16.00	1.25	0.07	0.00	56.80	1.25	0.07	0.00
16.80	1.25	0.07	0.00	57.60	1.25	0.07	0.00
17.60	1.25	0.07	0.00	58.40	1.25	0.07	0.00
18.40	1.25	0.07	0.00	59.20	1.25	0.07	0.00
19.20	1.25	0.07	0.00	60.00	1.25	0.07	0.00
20.00	1.25	0.07	0.00	60.80	1.25	0.07	0.00
20.80	1.25	0.07	0.00	61.60	1.25	0.07	0.00
21.60	1.25	0.07	0.00	62.40	1.25	0.07	0.00
22.40	1.25	0.07	0.00	63.20	1.25	0.07	0.00
23.20	1.25	0.07	0.00	64.00	1.25	0.07	0.00
24.00	1.25	0.07	0.00	64.80	1.25	0.07	0.00
24.80	1.25	0.07	0.00	65.60	1.25	0.07	0.00
25.60	1.25	0.07	0.00	66.40	1.25	0.07	0.00
26.40	1.25	0.07	0.00	67.20	1.25	0.07	0.00
27.20	1.25	0.07	0.00	68.00	1.25	0.07	0.00
28.00	1.25	0.07	0.00	68.80	1.25	0.07	0.00
28.80	1.25	0.07	0.00	69.60	1.25	0.07	0.00
29.60	1.25	0.07	0.00	70.40	1.25	0.07	0.00
30.40	1.25	0.07	0.00	71.20	1.25	0.07	0.00
31.20	1.25	0.07	0.00	72.00	1.25	0.07	0.00
32.00	1.25	0.07	0.00	72.80	1.25	0.07	0.00
32.80	1.25	0.07	0.00	73.60	1.25	0.07	0.00
33.60	1.25	0.07	0.00	74.40	1.25	0.07	0.00
34.40	1.25	0.07	0.00	75.20	1.25	0.07	0.00
35.20	1.25	0.07	0.00	76.00	1.25	0.07	0.00
36.00	1.25	0.07	0.00	76.80	1.25	0.07	0.00
36.80	1.25	0.07	0.00	77.60	1.25	0.07	0.00
37.60	1.25	0.07	0.00	78.40	1.25	0.07	0.00
38.40	1.25	0.07	0.00	79.20	1.25	0.07	0.00
39.20	1.25	0.07	0.00	80.00	1.25	0.07	0.00
40.00	1.25	0.07	0.00				

Summary for Subcatchment 25S: Basin 2 - Perv

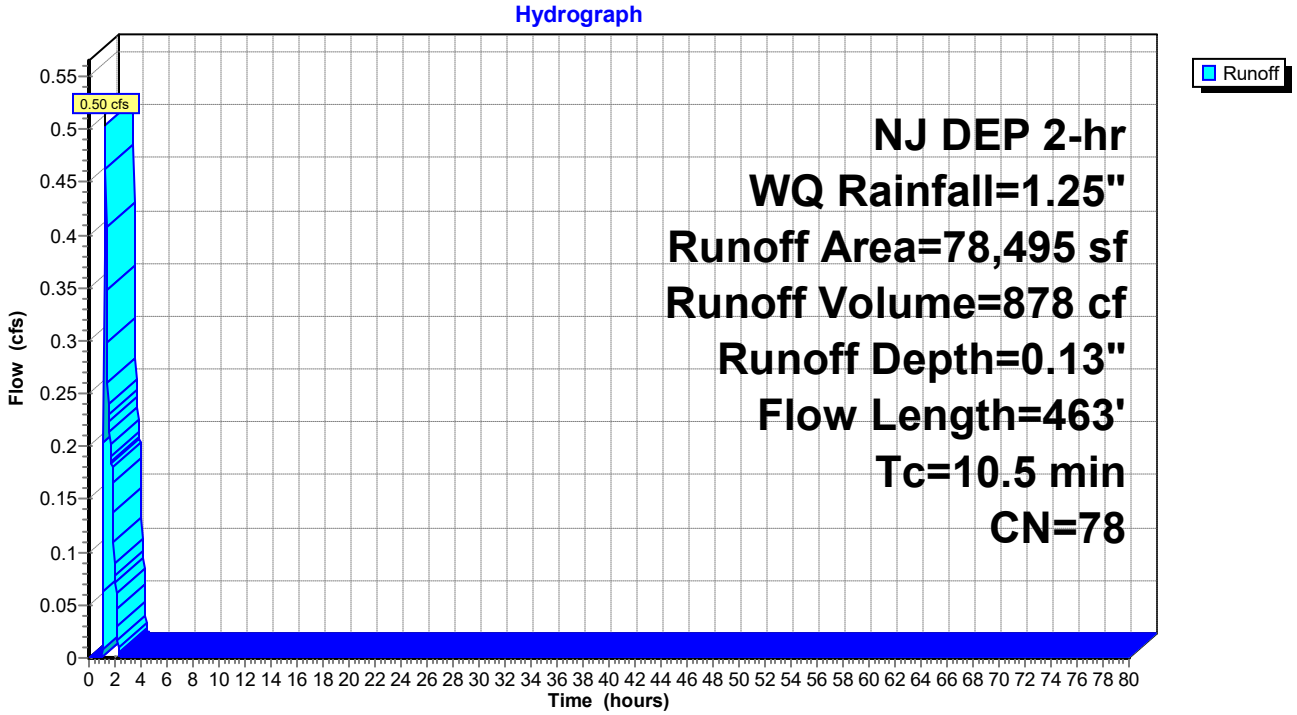
Runoff = 0.50 cfs @ 1.23 hrs, Volume= 878 cf, Depth= 0.13"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
47,097	80	>75% Grass cover, Good, HSG D
31,398	74	>75% Grass cover, Good, HSG C
78,495	78	Weighted Average
78,495		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 25S: Basin 2 - Perv



Hydrograph for Subcatchment 25S: Basin 2 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.13	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.13	0.00
1.60	**1.18**	**0.11**	**0.21**	42.40	1.25	0.13	0.00
2.40	**1.25**	**0.13**	0.00	43.20	1.25	0.13	0.00
3.20	1.25	0.13	0.00	44.00	1.25	0.13	0.00
4.00	1.25	0.13	0.00	44.80	1.25	0.13	0.00
4.80	1.25	0.13	0.00	45.60	1.25	0.13	0.00
5.60	1.25	0.13	0.00	46.40	1.25	0.13	0.00
6.40	1.25	0.13	0.00	47.20	1.25	0.13	0.00
7.20	1.25	0.13	0.00	48.00	1.25	0.13	0.00
8.00	1.25	0.13	0.00	48.80	1.25	0.13	0.00
8.80	1.25	0.13	0.00	49.60	1.25	0.13	0.00
9.60	1.25	0.13	0.00	50.40	1.25	0.13	0.00
10.40	1.25	0.13	0.00	51.20	1.25	0.13	0.00
11.20	1.25	0.13	0.00	52.00	1.25	0.13	0.00
12.00	1.25	0.13	0.00	52.80	1.25	0.13	0.00
12.80	1.25	0.13	0.00	53.60	1.25	0.13	0.00
13.60	1.25	0.13	0.00	54.40	1.25	0.13	0.00
14.40	1.25	0.13	0.00	55.20	1.25	0.13	0.00
15.20	1.25	0.13	0.00	56.00	1.25	0.13	0.00
16.00	1.25	0.13	0.00	56.80	1.25	0.13	0.00
16.80	1.25	0.13	0.00	57.60	1.25	0.13	0.00
17.60	1.25	0.13	0.00	58.40	1.25	0.13	0.00
18.40	1.25	0.13	0.00	59.20	1.25	0.13	0.00
19.20	1.25	0.13	0.00	60.00	1.25	0.13	0.00
20.00	1.25	0.13	0.00	60.80	1.25	0.13	0.00
20.80	1.25	0.13	0.00	61.60	1.25	0.13	0.00
21.60	1.25	0.13	0.00	62.40	1.25	0.13	0.00
22.40	1.25	0.13	0.00	63.20	1.25	0.13	0.00
23.20	1.25	0.13	0.00	64.00	1.25	0.13	0.00
24.00	1.25	0.13	0.00	64.80	1.25	0.13	0.00
24.80	1.25	0.13	0.00	65.60	1.25	0.13	0.00
25.60	1.25	0.13	0.00	66.40	1.25	0.13	0.00
26.40	1.25	0.13	0.00	67.20	1.25	0.13	0.00
27.20	1.25	0.13	0.00	68.00	1.25	0.13	0.00
28.00	1.25	0.13	0.00	68.80	1.25	0.13	0.00
28.80	1.25	0.13	0.00	69.60	1.25	0.13	0.00
29.60	1.25	0.13	0.00	70.40	1.25	0.13	0.00
30.40	1.25	0.13	0.00	71.20	1.25	0.13	0.00
31.20	1.25	0.13	0.00	72.00	1.25	0.13	0.00
32.00	1.25	0.13	0.00	72.80	1.25	0.13	0.00
32.80	1.25	0.13	0.00	73.60	1.25	0.13	0.00
33.60	1.25	0.13	0.00	74.40	1.25	0.13	0.00
34.40	1.25	0.13	0.00	75.20	1.25	0.13	0.00
35.20	1.25	0.13	0.00	76.00	1.25	0.13	0.00
36.00	1.25	0.13	0.00	76.80	1.25	0.13	0.00
36.80	1.25	0.13	0.00	77.60	1.25	0.13	0.00
37.60	1.25	0.13	0.00	78.40	1.25	0.13	0.00
38.40	1.25	0.13	0.00	79.20	1.25	0.13	0.00
39.20	1.25	0.13	0.00	80.00	1.25	0.13	0.00
40.00	1.25	0.13	0.00				

Summary for Subcatchment 28S: Basin 2 - Imp

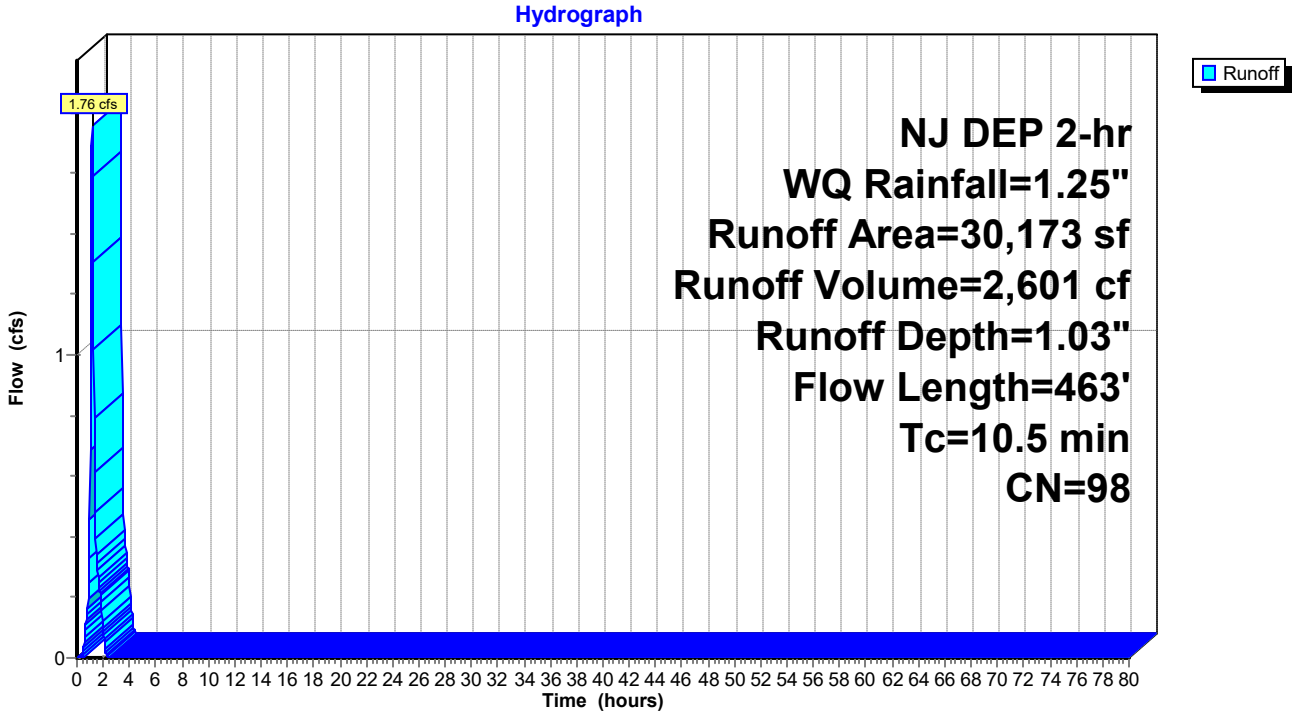
Runoff = 1.76 cfs @ 1.15 hrs, Volume= 2,601 cf, Depth= 1.03"
Routed to Pond 27P : Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
28,866	98	Paved parking, HSG C
1,307	98	Paved parking, HSG D
30,173	98	Weighted Average
30,173		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	93	0.0500	0.17		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.5	370	0.0650	4.10		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
10.5	463	Total			

Subcatchment 28S: Basin 2 - Imp



Hydrograph for Subcatchment 28S: Basin 2 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.16**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.27**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 29S: Basin 8 - Imp

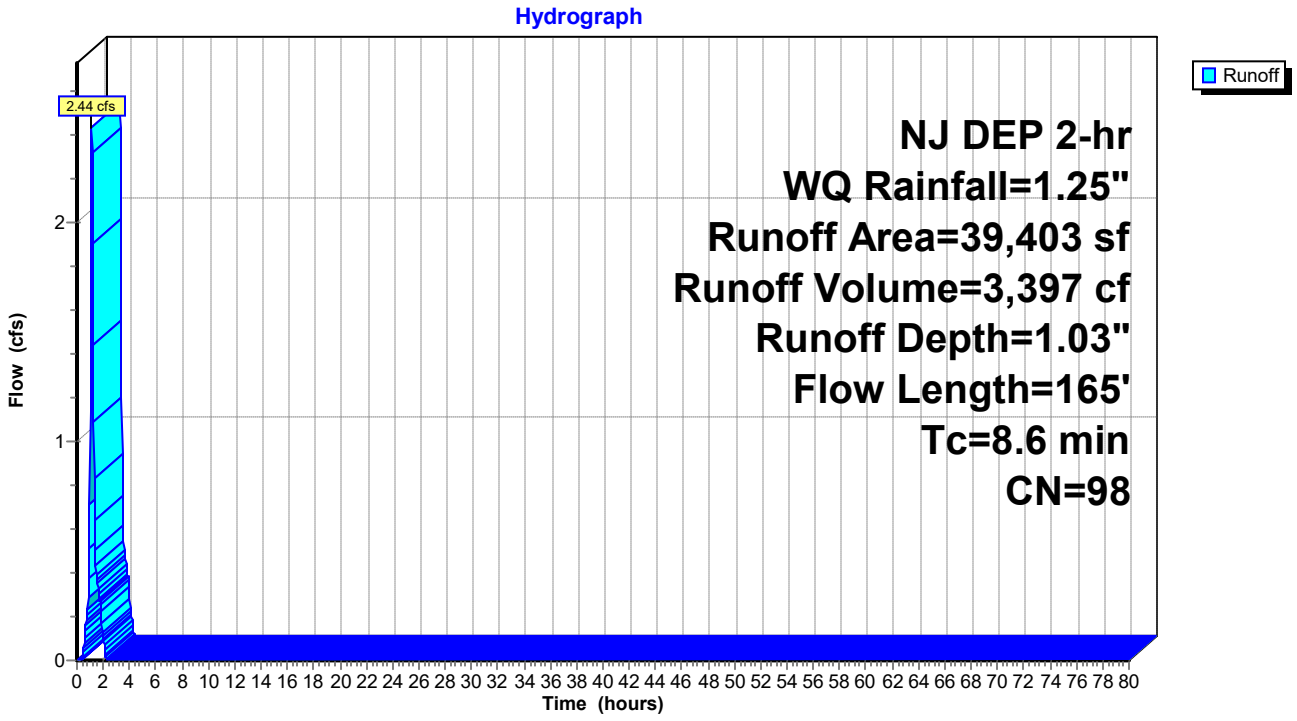
Runoff = 2.44 cfs @ 1.13 hrs, Volume= 3,397 cf, Depth= 1.03"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
24,632	98	Paved parking, HSG C
14,771	98	Paved parking, HSG D
39,403	98	Weighted Average
39,403		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 29S: Basin 8 - Imp



Hydrograph for Subcatchment 29S: Basin 8 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.23**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.33**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 30S: Basin 8 - Perv

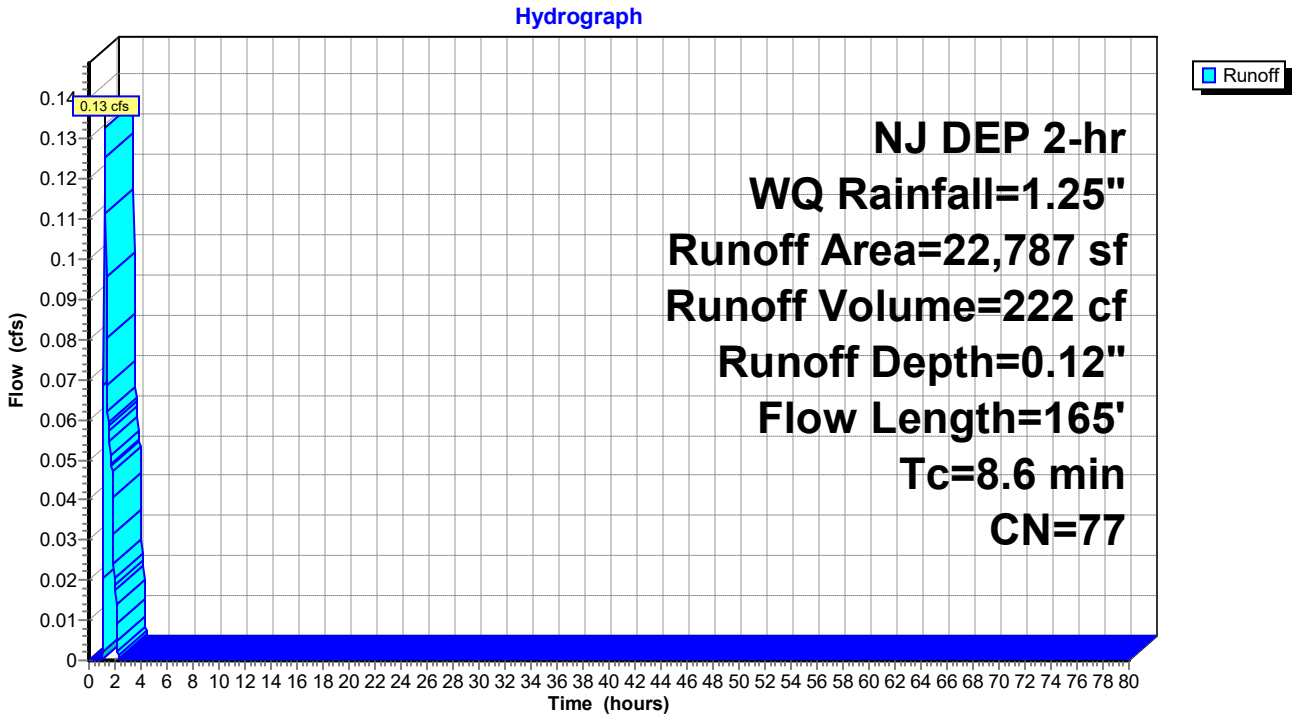
Runoff = 0.13 cfs @ 1.21 hrs, Volume= 222 cf, Depth= 0.12"
Routed to Pond 48P : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
11,542	80	>75% Grass cover, Good, HSG D
11,245	74	>75% Grass cover, Good, HSG C
22,787	77	Weighted Average
22,787		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0700	0.20		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	65	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
8.6	165	Total			

Subcatchment 30S: Basin 8 - Perv



Hydrograph for Subcatchment 30S: Basin 8 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.12	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.12	0.00
1.60	**1.18**	**0.10**	**0.05**	42.40	1.25	0.12	0.00
2.40	**1.25**	**0.12**	0.00	43.20	1.25	0.12	0.00
3.20	1.25	0.12	0.00	44.00	1.25	0.12	0.00
4.00	1.25	0.12	0.00	44.80	1.25	0.12	0.00
4.80	1.25	0.12	0.00	45.60	1.25	0.12	0.00
5.60	1.25	0.12	0.00	46.40	1.25	0.12	0.00
6.40	1.25	0.12	0.00	47.20	1.25	0.12	0.00
7.20	1.25	0.12	0.00	48.00	1.25	0.12	0.00
8.00	1.25	0.12	0.00	48.80	1.25	0.12	0.00
8.80	1.25	0.12	0.00	49.60	1.25	0.12	0.00
9.60	1.25	0.12	0.00	50.40	1.25	0.12	0.00
10.40	1.25	0.12	0.00	51.20	1.25	0.12	0.00
11.20	1.25	0.12	0.00	52.00	1.25	0.12	0.00
12.00	1.25	0.12	0.00	52.80	1.25	0.12	0.00
12.80	1.25	0.12	0.00	53.60	1.25	0.12	0.00
13.60	1.25	0.12	0.00	54.40	1.25	0.12	0.00
14.40	1.25	0.12	0.00	55.20	1.25	0.12	0.00
15.20	1.25	0.12	0.00	56.00	1.25	0.12	0.00
16.00	1.25	0.12	0.00	56.80	1.25	0.12	0.00
16.80	1.25	0.12	0.00	57.60	1.25	0.12	0.00
17.60	1.25	0.12	0.00	58.40	1.25	0.12	0.00
18.40	1.25	0.12	0.00	59.20	1.25	0.12	0.00
19.20	1.25	0.12	0.00	60.00	1.25	0.12	0.00
20.00	1.25	0.12	0.00	60.80	1.25	0.12	0.00
20.80	1.25	0.12	0.00	61.60	1.25	0.12	0.00
21.60	1.25	0.12	0.00	62.40	1.25	0.12	0.00
22.40	1.25	0.12	0.00	63.20	1.25	0.12	0.00
23.20	1.25	0.12	0.00	64.00	1.25	0.12	0.00
24.00	1.25	0.12	0.00	64.80	1.25	0.12	0.00
24.80	1.25	0.12	0.00	65.60	1.25	0.12	0.00
25.60	1.25	0.12	0.00	66.40	1.25	0.12	0.00
26.40	1.25	0.12	0.00	67.20	1.25	0.12	0.00
27.20	1.25	0.12	0.00	68.00	1.25	0.12	0.00
28.00	1.25	0.12	0.00	68.80	1.25	0.12	0.00
28.80	1.25	0.12	0.00	69.60	1.25	0.12	0.00
29.60	1.25	0.12	0.00	70.40	1.25	0.12	0.00
30.40	1.25	0.12	0.00	71.20	1.25	0.12	0.00
31.20	1.25	0.12	0.00	72.00	1.25	0.12	0.00
32.00	1.25	0.12	0.00	72.80	1.25	0.12	0.00
32.80	1.25	0.12	0.00	73.60	1.25	0.12	0.00
33.60	1.25	0.12	0.00	74.40	1.25	0.12	0.00
34.40	1.25	0.12	0.00	75.20	1.25	0.12	0.00
35.20	1.25	0.12	0.00	76.00	1.25	0.12	0.00
36.00	1.25	0.12	0.00	76.80	1.25	0.12	0.00
36.80	1.25	0.12	0.00	77.60	1.25	0.12	0.00
37.60	1.25	0.12	0.00	78.40	1.25	0.12	0.00
38.40	1.25	0.12	0.00	79.20	1.25	0.12	0.00
39.20	1.25	0.12	0.00	80.00	1.25	0.12	0.00
40.00	1.25	0.12	0.00				

Summary for Subcatchment 31S: Basin 7 - Imp

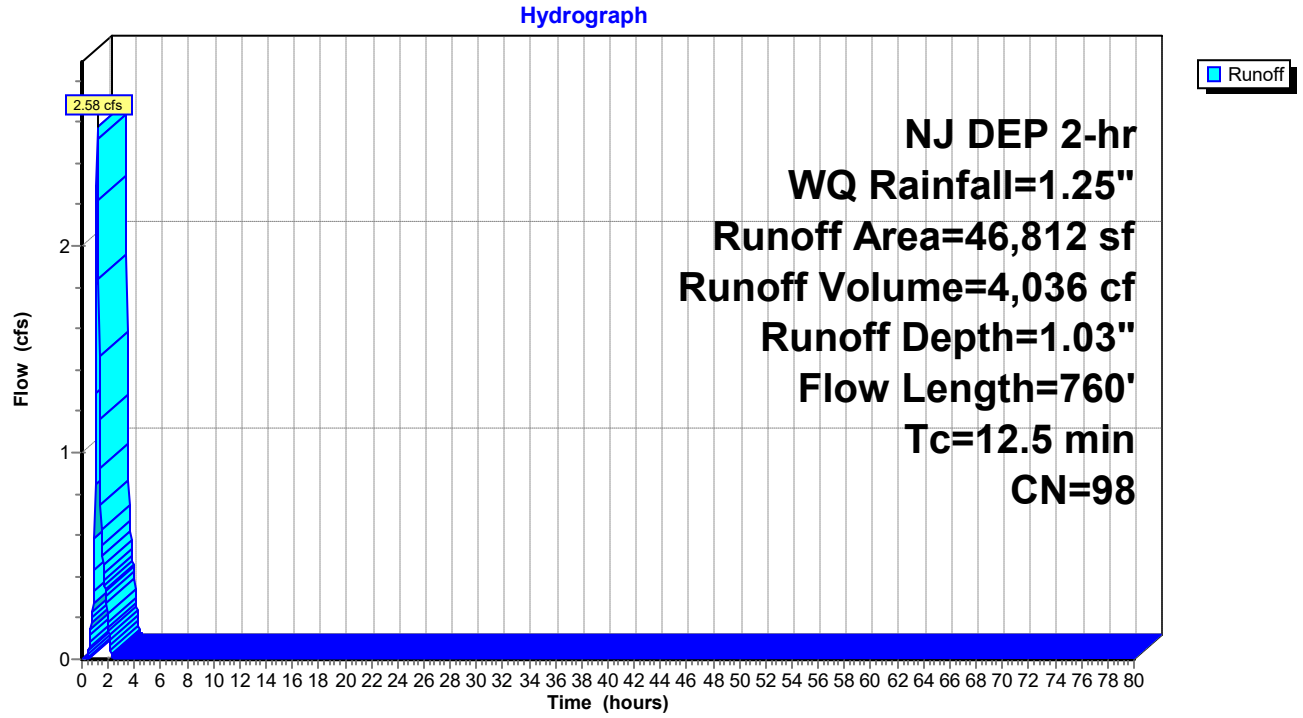
Runoff = 2.58 cfs @ 1.17 hrs, Volume= 4,036 cf, Depth= 1.03"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
15,723	98	Paved parking, HSG D
31,089	98	Paved parking, HSG C
46,812	98	Weighted Average
46,812		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 31S: Basin 7 - Imp



Hydrograph for Subcatchment 31S: Basin 7 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.23**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.46**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 32S: Basin 7 - Perv

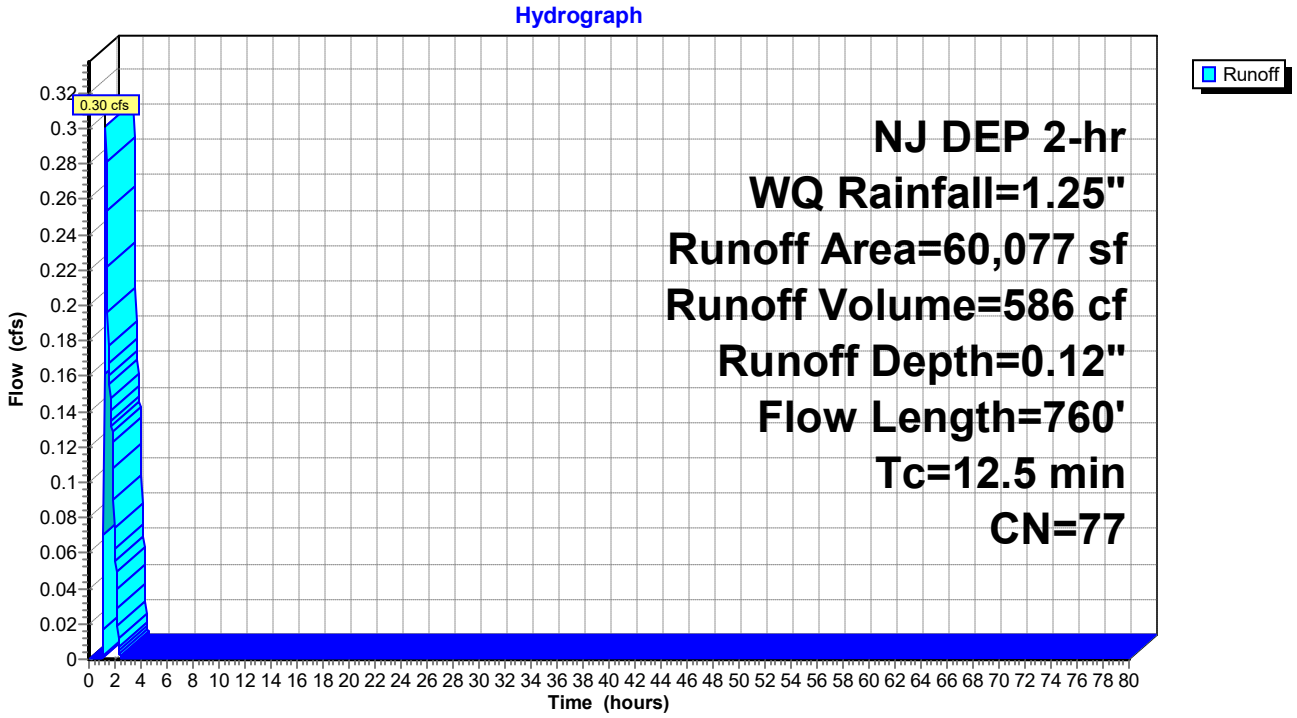
Runoff = 0.30 cfs @ 1.27 hrs, Volume= 586 cf, Depth= 0.12"
Routed to Pond 49P : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
25,517	80	>75% Grass cover, Good, HSG D
34,560	74	>75% Grass cover, Good, HSG C
60,077	77	Weighted Average
60,077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.1	272	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.1	40	0.0670	5.25		**Shallow Concentrated Flow, SCF (C-D)** Paved Kv= 20.3 fps
2.4	365		2.50		**Direct Entry, Pipe Flow**
12.5	760	Total			

Subcatchment 32S: Basin 7 - Perv



Hydrograph for Subcatchment 32S: Basin 7 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.12	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.12	0.00
1.60	**1.18**	**0.10**	**0.15**	42.40	1.25	0.12	0.00
2.40	**1.25**	**0.12**	0.00	43.20	1.25	0.12	0.00
3.20	1.25	0.12	0.00	44.00	1.25	0.12	0.00
4.00	1.25	0.12	0.00	44.80	1.25	0.12	0.00
4.80	1.25	0.12	0.00	45.60	1.25	0.12	0.00
5.60	1.25	0.12	0.00	46.40	1.25	0.12	0.00
6.40	1.25	0.12	0.00	47.20	1.25	0.12	0.00
7.20	1.25	0.12	0.00	48.00	1.25	0.12	0.00
8.00	1.25	0.12	0.00	48.80	1.25	0.12	0.00
8.80	1.25	0.12	0.00	49.60	1.25	0.12	0.00
9.60	1.25	0.12	0.00	50.40	1.25	0.12	0.00
10.40	1.25	0.12	0.00	51.20	1.25	0.12	0.00
11.20	1.25	0.12	0.00	52.00	1.25	0.12	0.00
12.00	1.25	0.12	0.00	52.80	1.25	0.12	0.00
12.80	1.25	0.12	0.00	53.60	1.25	0.12	0.00
13.60	1.25	0.12	0.00	54.40	1.25	0.12	0.00
14.40	1.25	0.12	0.00	55.20	1.25	0.12	0.00
15.20	1.25	0.12	0.00	56.00	1.25	0.12	0.00
16.00	1.25	0.12	0.00	56.80	1.25	0.12	0.00
16.80	1.25	0.12	0.00	57.60	1.25	0.12	0.00
17.60	1.25	0.12	0.00	58.40	1.25	0.12	0.00
18.40	1.25	0.12	0.00	59.20	1.25	0.12	0.00
19.20	1.25	0.12	0.00	60.00	1.25	0.12	0.00
20.00	1.25	0.12	0.00	60.80	1.25	0.12	0.00
20.80	1.25	0.12	0.00	61.60	1.25	0.12	0.00
21.60	1.25	0.12	0.00	62.40	1.25	0.12	0.00
22.40	1.25	0.12	0.00	63.20	1.25	0.12	0.00
23.20	1.25	0.12	0.00	64.00	1.25	0.12	0.00
24.00	1.25	0.12	0.00	64.80	1.25	0.12	0.00
24.80	1.25	0.12	0.00	65.60	1.25	0.12	0.00
25.60	1.25	0.12	0.00	66.40	1.25	0.12	0.00
26.40	1.25	0.12	0.00	67.20	1.25	0.12	0.00
27.20	1.25	0.12	0.00	68.00	1.25	0.12	0.00
28.00	1.25	0.12	0.00	68.80	1.25	0.12	0.00
28.80	1.25	0.12	0.00	69.60	1.25	0.12	0.00
29.60	1.25	0.12	0.00	70.40	1.25	0.12	0.00
30.40	1.25	0.12	0.00	71.20	1.25	0.12	0.00
31.20	1.25	0.12	0.00	72.00	1.25	0.12	0.00
32.00	1.25	0.12	0.00	72.80	1.25	0.12	0.00
32.80	1.25	0.12	0.00	73.60	1.25	0.12	0.00
33.60	1.25	0.12	0.00	74.40	1.25	0.12	0.00
34.40	1.25	0.12	0.00	75.20	1.25	0.12	0.00
35.20	1.25	0.12	0.00	76.00	1.25	0.12	0.00
36.00	1.25	0.12	0.00	76.80	1.25	0.12	0.00
36.80	1.25	0.12	0.00	77.60	1.25	0.12	0.00
37.60	1.25	0.12	0.00	78.40	1.25	0.12	0.00
38.40	1.25	0.12	0.00	79.20	1.25	0.12	0.00
39.20	1.25	0.12	0.00	80.00	1.25	0.12	0.00
40.00	1.25	0.12	0.00				

Summary for Subcatchment 35S: DA 2 Und - Imp

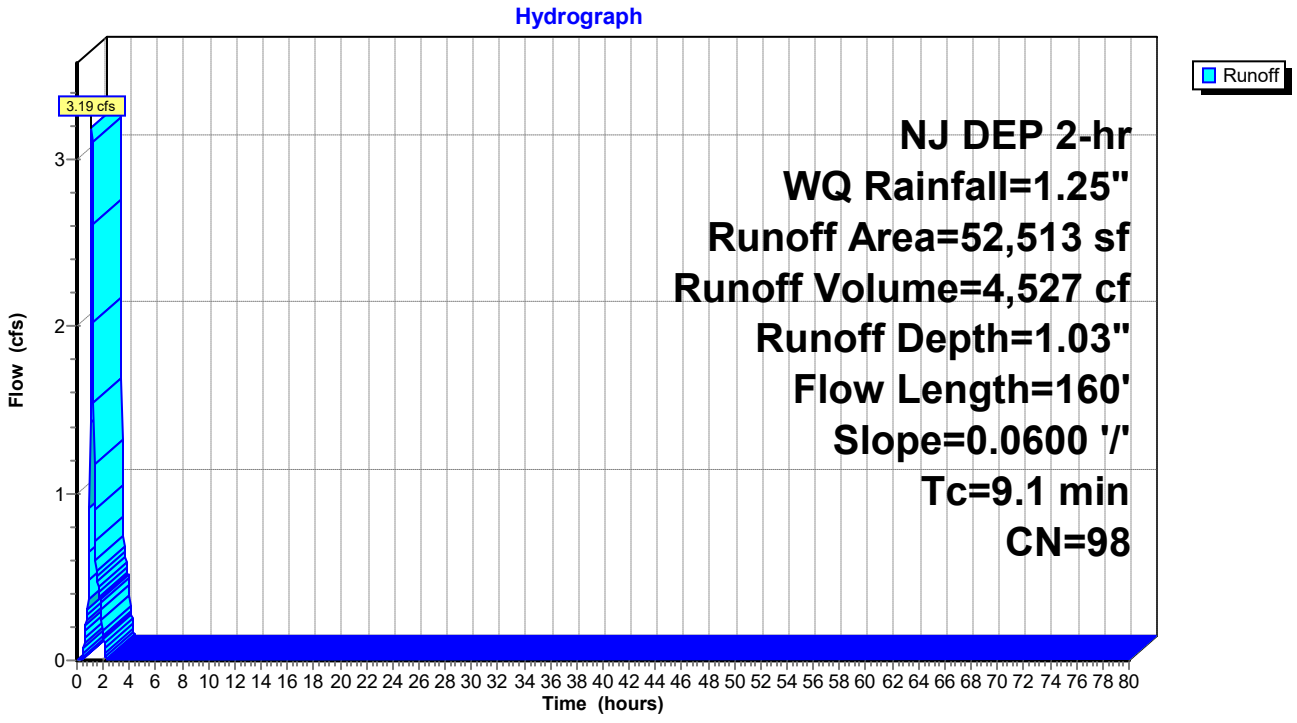
Runoff = 3.19 cfs @ 1.13 hrs, Volume= 4,527 cf, Depth= 1.03"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
19,504	98	Paved parking, HSG C
33,009	98	Paved parking, HSG D
52,513	98	Weighted Average
52,513		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 35S: DA 2 Und - Imp



Hydrograph for Subcatchment 35S: DA 2 Und - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.30**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.44**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 36S: DA 2 Und - Perv

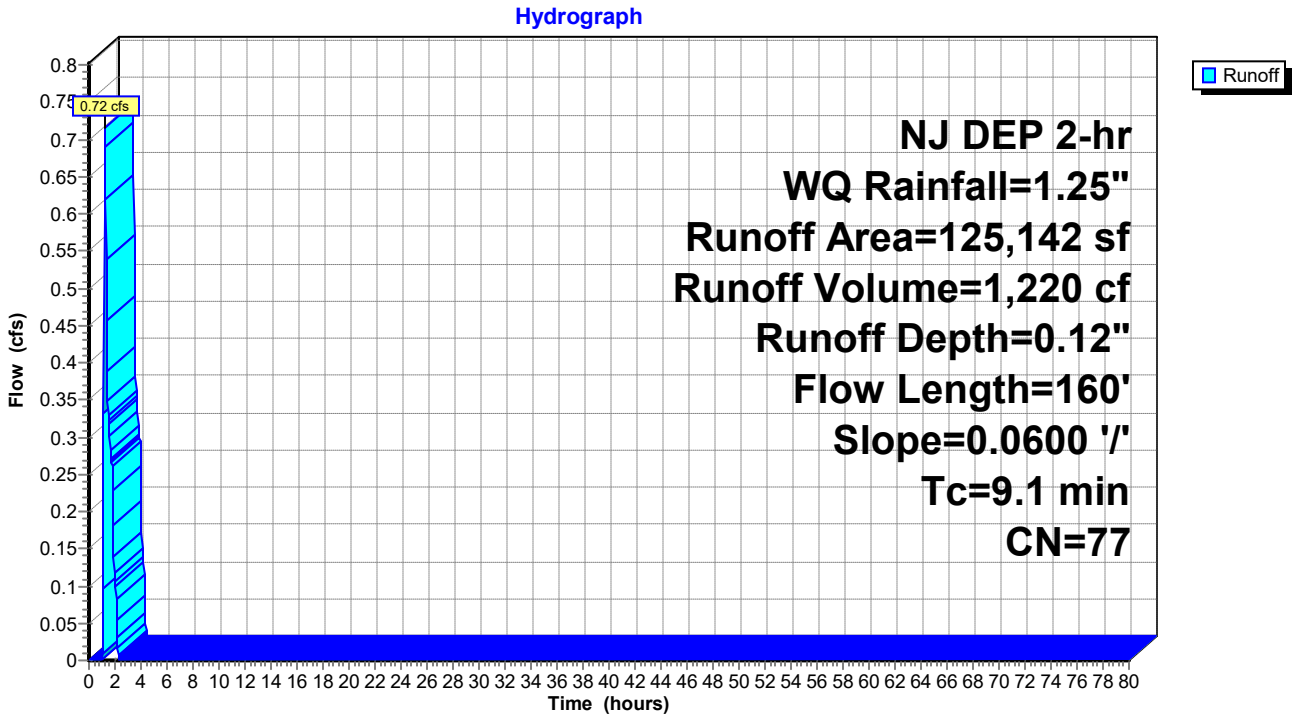
Runoff = 0.72 cfs @ 1.21 hrs, Volume= 1,220 cf, Depth= 0.12"
Routed to Link 34L : DA 2 Undetained

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
57,417	80	>75% Grass cover, Good, HSG D
67,725	74	>75% Grass cover, Good, HSG C
125,142	77	Weighted Average
125,142		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.3	60	0.0600	3.94		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.1	160	Total			

Subcatchment 36S: DA 2 Und - Perv



Hydrograph for Subcatchment 36S: DA 2 Und - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.12	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.12	0.00
1.60	**1.18**	**0.10**	**0.30**	42.40	1.25	0.12	0.00
2.40	**1.25**	**0.12**	0.00	43.20	1.25	0.12	0.00
3.20	1.25	0.12	0.00	44.00	1.25	0.12	0.00
4.00	1.25	0.12	0.00	44.80	1.25	0.12	0.00
4.80	1.25	0.12	0.00	45.60	1.25	0.12	0.00
5.60	1.25	0.12	0.00	46.40	1.25	0.12	0.00
6.40	1.25	0.12	0.00	47.20	1.25	0.12	0.00
7.20	1.25	0.12	0.00	48.00	1.25	0.12	0.00
8.00	1.25	0.12	0.00	48.80	1.25	0.12	0.00
8.80	1.25	0.12	0.00	49.60	1.25	0.12	0.00
9.60	1.25	0.12	0.00	50.40	1.25	0.12	0.00
10.40	1.25	0.12	0.00	51.20	1.25	0.12	0.00
11.20	1.25	0.12	0.00	52.00	1.25	0.12	0.00
12.00	1.25	0.12	0.00	52.80	1.25	0.12	0.00
12.80	1.25	0.12	0.00	53.60	1.25	0.12	0.00
13.60	1.25	0.12	0.00	54.40	1.25	0.12	0.00
14.40	1.25	0.12	0.00	55.20	1.25	0.12	0.00
15.20	1.25	0.12	0.00	56.00	1.25	0.12	0.00
16.00	1.25	0.12	0.00	56.80	1.25	0.12	0.00
16.80	1.25	0.12	0.00	57.60	1.25	0.12	0.00
17.60	1.25	0.12	0.00	58.40	1.25	0.12	0.00
18.40	1.25	0.12	0.00	59.20	1.25	0.12	0.00
19.20	1.25	0.12	0.00	60.00	1.25	0.12	0.00
20.00	1.25	0.12	0.00	60.80	1.25	0.12	0.00
20.80	1.25	0.12	0.00	61.60	1.25	0.12	0.00
21.60	1.25	0.12	0.00	62.40	1.25	0.12	0.00
22.40	1.25	0.12	0.00	63.20	1.25	0.12	0.00
23.20	1.25	0.12	0.00	64.00	1.25	0.12	0.00
24.00	1.25	0.12	0.00	64.80	1.25	0.12	0.00
24.80	1.25	0.12	0.00	65.60	1.25	0.12	0.00
25.60	1.25	0.12	0.00	66.40	1.25	0.12	0.00
26.40	1.25	0.12	0.00	67.20	1.25	0.12	0.00
27.20	1.25	0.12	0.00	68.00	1.25	0.12	0.00
28.00	1.25	0.12	0.00	68.80	1.25	0.12	0.00
28.80	1.25	0.12	0.00	69.60	1.25	0.12	0.00
29.60	1.25	0.12	0.00	70.40	1.25	0.12	0.00
30.40	1.25	0.12	0.00	71.20	1.25	0.12	0.00
31.20	1.25	0.12	0.00	72.00	1.25	0.12	0.00
32.00	1.25	0.12	0.00	72.80	1.25	0.12	0.00
32.80	1.25	0.12	0.00	73.60	1.25	0.12	0.00
33.60	1.25	0.12	0.00	74.40	1.25	0.12	0.00
34.40	1.25	0.12	0.00	75.20	1.25	0.12	0.00
35.20	1.25	0.12	0.00	76.00	1.25	0.12	0.00
36.00	1.25	0.12	0.00	76.80	1.25	0.12	0.00
36.80	1.25	0.12	0.00	77.60	1.25	0.12	0.00
37.60	1.25	0.12	0.00	78.40	1.25	0.12	0.00
38.40	1.25	0.12	0.00	79.20	1.25	0.12	0.00
39.20	1.25	0.12	0.00	80.00	1.25	0.12	0.00
40.00	1.25	0.12	0.00				

Summary for Subcatchment 45S: Basin 11 - Imp

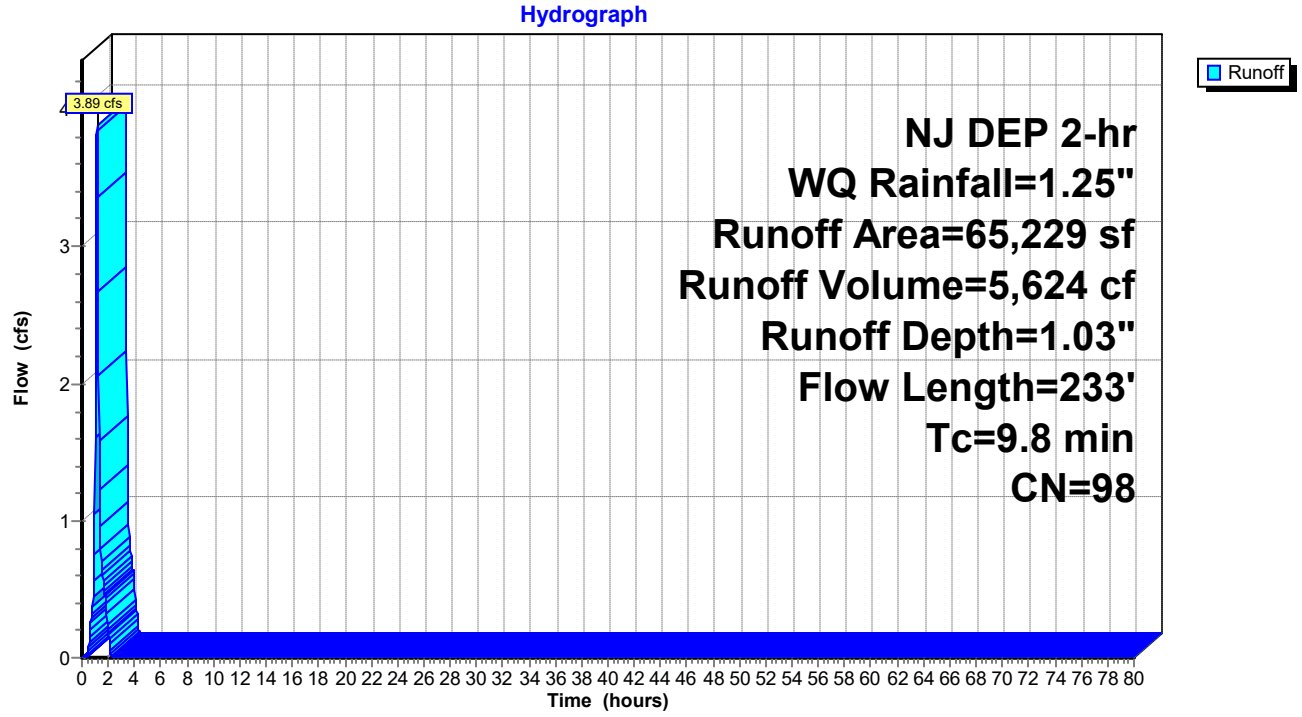
Runoff = 3.89 cfs @ 1.14 hrs, Volume= 5,624 cf, Depth= 1.03"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
4,356	98	Roofs, HSG D
7,377	98	Paved parking, HSG D
27,007	98	Roofs, HSG C
26,489	98	Paved parking, HSG C
65,229	98	Weighted Average
65,229		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 45S: Basin 11 - Imp



Hydrograph for Subcatchment 45S: Basin 11 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.37**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.56**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 46S: Basin 11 - Perv

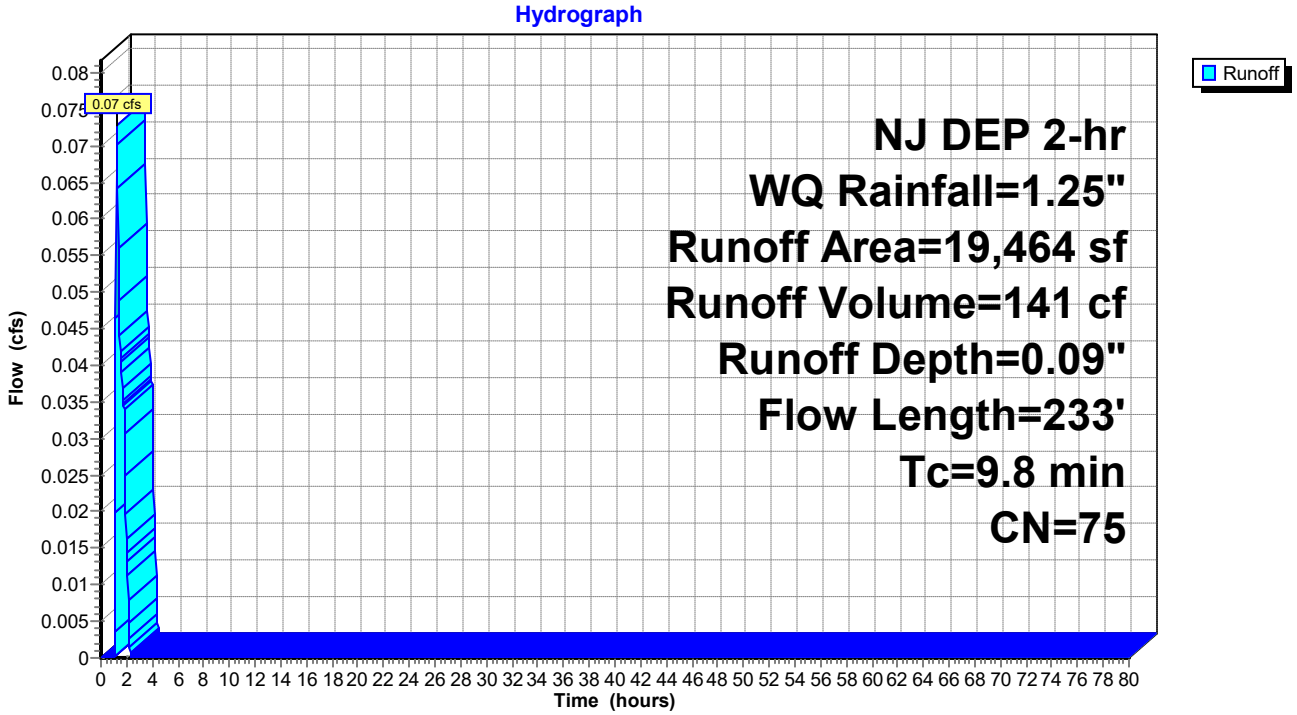
Runoff = 0.07 cfs @ 1.25 hrs, Volume= 141 cf, Depth= 0.09"
Routed to Pond 33P : Basin 11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
2,920	80	>75% Grass cover, Good, HSG D
16,544	74	>75% Grass cover, Good, HSG C
19,464	75	Weighted Average
19,464		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	83	0.0400	0.15		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
0.9	150	0.0330	2.92		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
9.8	233	Total			

Subcatchment 46S: Basin 11 - Perv



Hydrograph for Subcatchment 46S: Basin 11 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.09	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.09	0.00
1.60	**1.18**	**0.07**	**0.04**	42.40	1.25	0.09	0.00
2.40	**1.25**	**0.09**	0.00	43.20	1.25	0.09	0.00
3.20	1.25	0.09	0.00	44.00	1.25	0.09	0.00
4.00	1.25	0.09	0.00	44.80	1.25	0.09	0.00
4.80	1.25	0.09	0.00	45.60	1.25	0.09	0.00
5.60	1.25	0.09	0.00	46.40	1.25	0.09	0.00
6.40	1.25	0.09	0.00	47.20	1.25	0.09	0.00
7.20	1.25	0.09	0.00	48.00	1.25	0.09	0.00
8.00	1.25	0.09	0.00	48.80	1.25	0.09	0.00
8.80	1.25	0.09	0.00	49.60	1.25	0.09	0.00
9.60	1.25	0.09	0.00	50.40	1.25	0.09	0.00
10.40	1.25	0.09	0.00	51.20	1.25	0.09	0.00
11.20	1.25	0.09	0.00	52.00	1.25	0.09	0.00
12.00	1.25	0.09	0.00	52.80	1.25	0.09	0.00
12.80	1.25	0.09	0.00	53.60	1.25	0.09	0.00
13.60	1.25	0.09	0.00	54.40	1.25	0.09	0.00
14.40	1.25	0.09	0.00	55.20	1.25	0.09	0.00
15.20	1.25	0.09	0.00	56.00	1.25	0.09	0.00
16.00	1.25	0.09	0.00	56.80	1.25	0.09	0.00
16.80	1.25	0.09	0.00	57.60	1.25	0.09	0.00
17.60	1.25	0.09	0.00	58.40	1.25	0.09	0.00
18.40	1.25	0.09	0.00	59.20	1.25	0.09	0.00
19.20	1.25	0.09	0.00	60.00	1.25	0.09	0.00
20.00	1.25	0.09	0.00	60.80	1.25	0.09	0.00
20.80	1.25	0.09	0.00	61.60	1.25	0.09	0.00
21.60	1.25	0.09	0.00	62.40	1.25	0.09	0.00
22.40	1.25	0.09	0.00	63.20	1.25	0.09	0.00
23.20	1.25	0.09	0.00	64.00	1.25	0.09	0.00
24.00	1.25	0.09	0.00	64.80	1.25	0.09	0.00
24.80	1.25	0.09	0.00	65.60	1.25	0.09	0.00
25.60	1.25	0.09	0.00	66.40	1.25	0.09	0.00
26.40	1.25	0.09	0.00	67.20	1.25	0.09	0.00
27.20	1.25	0.09	0.00	68.00	1.25	0.09	0.00
28.00	1.25	0.09	0.00	68.80	1.25	0.09	0.00
28.80	1.25	0.09	0.00	69.60	1.25	0.09	0.00
29.60	1.25	0.09	0.00	70.40	1.25	0.09	0.00
30.40	1.25	0.09	0.00	71.20	1.25	0.09	0.00
31.20	1.25	0.09	0.00	72.00	1.25	0.09	0.00
32.00	1.25	0.09	0.00	72.80	1.25	0.09	0.00
32.80	1.25	0.09	0.00	73.60	1.25	0.09	0.00
33.60	1.25	0.09	0.00	74.40	1.25	0.09	0.00
34.40	1.25	0.09	0.00	75.20	1.25	0.09	0.00
35.20	1.25	0.09	0.00	76.00	1.25	0.09	0.00
36.00	1.25	0.09	0.00	76.80	1.25	0.09	0.00
36.80	1.25	0.09	0.00	77.60	1.25	0.09	0.00
37.60	1.25	0.09	0.00	78.40	1.25	0.09	0.00
38.40	1.25	0.09	0.00	79.20	1.25	0.09	0.00
39.20	1.25	0.09	0.00	80.00	1.25	0.09	0.00
40.00	1.25	0.09	0.00				

Summary for Subcatchment 51S: Basin 10 - Imp

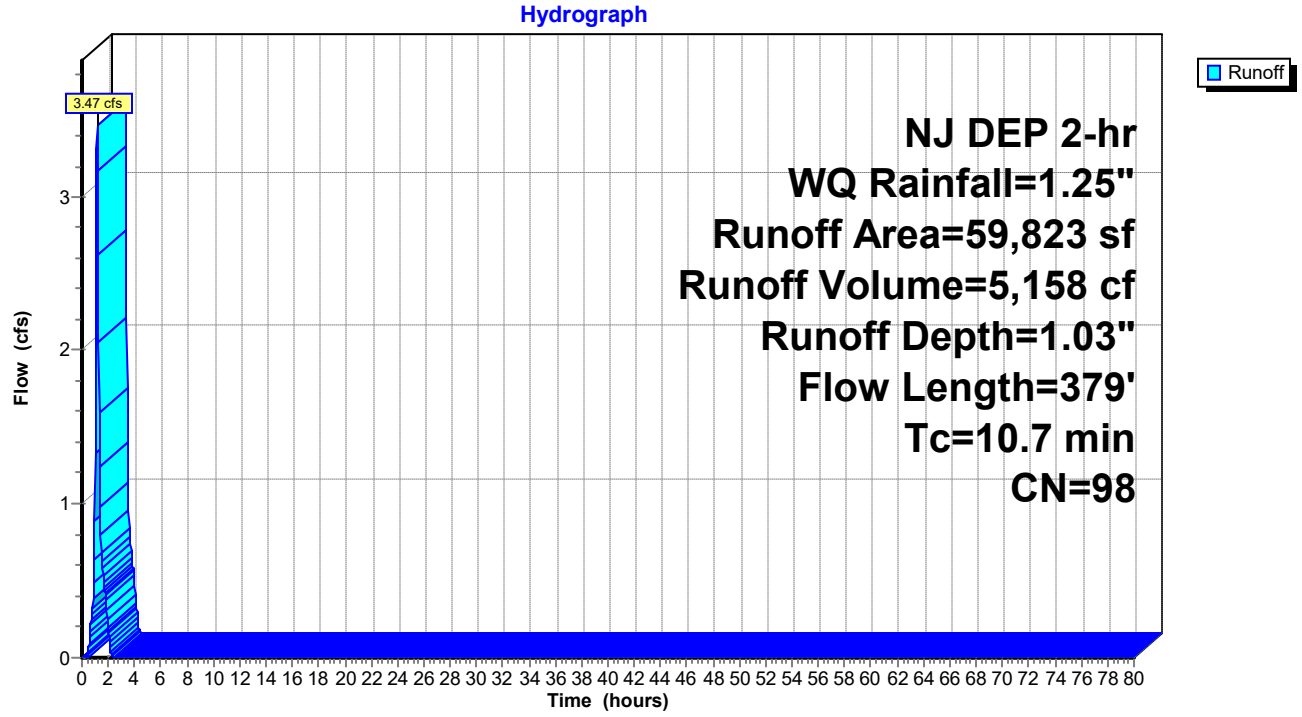
Runoff = 3.47 cfs @ 1.15 hrs, Volume= 5,158 cf, Depth= 1.03"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
19,602	98	Paved parking, HSG C
35,284	98	Roofs, HSG C
4,937	98	Paved parking, HSG D
59,823	98	Weighted Average
59,823		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 51S: Basin 10 - Imp



Hydrograph for Subcatchment 51S: Basin 10 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.32**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.54**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 52S: Basin 10 - Perv

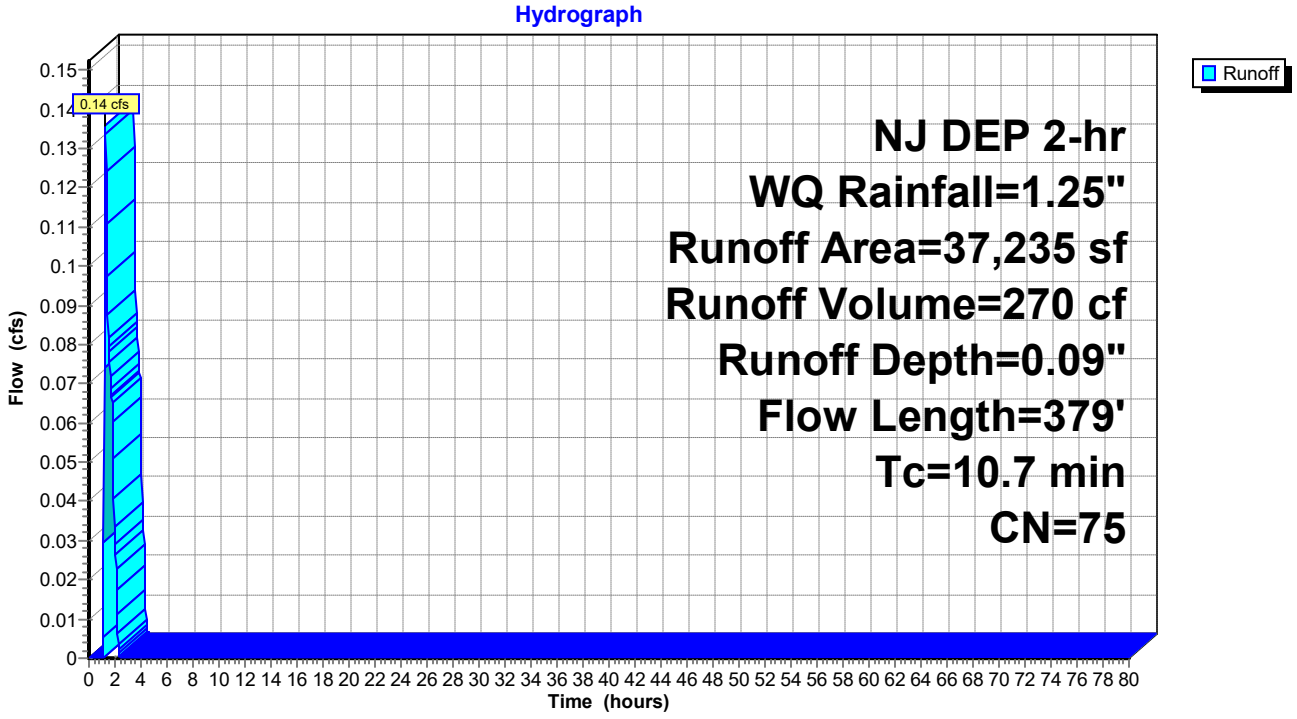
Runoff = 0.14 cfs @ 1.26 hrs, Volume= 270 cf, Depth= 0.09"
Routed to Pond 41P : Basin 10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
7,626	80	>75% Grass cover, Good, HSG D
29,609	74	>75% Grass cover, Good, HSG C
37,235	75	Weighted Average
37,235		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	59	0.0200	0.11		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47" Using McCuen-Spiess flow length
1.0	210	0.0480	3.53		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
0.7	110		2.50		**Direct Entry, Pipe Flow (C-D)**
10.7	379	Total			

Subcatchment 52S: Basin 10 - Perv



Hydrograph for Subcatchment 52S: Basin 10 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.09	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.09	0.00
1.60	**1.18**	**0.07**	**0.08**	42.40	1.25	0.09	0.00
2.40	**1.25**	**0.09**	0.00	43.20	1.25	0.09	0.00
3.20	1.25	0.09	0.00	44.00	1.25	0.09	0.00
4.00	1.25	0.09	0.00	44.80	1.25	0.09	0.00
4.80	1.25	0.09	0.00	45.60	1.25	0.09	0.00
5.60	1.25	0.09	0.00	46.40	1.25	0.09	0.00
6.40	1.25	0.09	0.00	47.20	1.25	0.09	0.00
7.20	1.25	0.09	0.00	48.00	1.25	0.09	0.00
8.00	1.25	0.09	0.00	48.80	1.25	0.09	0.00
8.80	1.25	0.09	0.00	49.60	1.25	0.09	0.00
9.60	1.25	0.09	0.00	50.40	1.25	0.09	0.00
10.40	1.25	0.09	0.00	51.20	1.25	0.09	0.00
11.20	1.25	0.09	0.00	52.00	1.25	0.09	0.00
12.00	1.25	0.09	0.00	52.80	1.25	0.09	0.00
12.80	1.25	0.09	0.00	53.60	1.25	0.09	0.00
13.60	1.25	0.09	0.00	54.40	1.25	0.09	0.00
14.40	1.25	0.09	0.00	55.20	1.25	0.09	0.00
15.20	1.25	0.09	0.00	56.00	1.25	0.09	0.00
16.00	1.25	0.09	0.00	56.80	1.25	0.09	0.00
16.80	1.25	0.09	0.00	57.60	1.25	0.09	0.00
17.60	1.25	0.09	0.00	58.40	1.25	0.09	0.00
18.40	1.25	0.09	0.00	59.20	1.25	0.09	0.00
19.20	1.25	0.09	0.00	60.00	1.25	0.09	0.00
20.00	1.25	0.09	0.00	60.80	1.25	0.09	0.00
20.80	1.25	0.09	0.00	61.60	1.25	0.09	0.00
21.60	1.25	0.09	0.00	62.40	1.25	0.09	0.00
22.40	1.25	0.09	0.00	63.20	1.25	0.09	0.00
23.20	1.25	0.09	0.00	64.00	1.25	0.09	0.00
24.00	1.25	0.09	0.00	64.80	1.25	0.09	0.00
24.80	1.25	0.09	0.00	65.60	1.25	0.09	0.00
25.60	1.25	0.09	0.00	66.40	1.25	0.09	0.00
26.40	1.25	0.09	0.00	67.20	1.25	0.09	0.00
27.20	1.25	0.09	0.00	68.00	1.25	0.09	0.00
28.00	1.25	0.09	0.00	68.80	1.25	0.09	0.00
28.80	1.25	0.09	0.00	69.60	1.25	0.09	0.00
29.60	1.25	0.09	0.00	70.40	1.25	0.09	0.00
30.40	1.25	0.09	0.00	71.20	1.25	0.09	0.00
31.20	1.25	0.09	0.00	72.00	1.25	0.09	0.00
32.00	1.25	0.09	0.00	72.80	1.25	0.09	0.00
32.80	1.25	0.09	0.00	73.60	1.25	0.09	0.00
33.60	1.25	0.09	0.00	74.40	1.25	0.09	0.00
34.40	1.25	0.09	0.00	75.20	1.25	0.09	0.00
35.20	1.25	0.09	0.00	76.00	1.25	0.09	0.00
36.00	1.25	0.09	0.00	76.80	1.25	0.09	0.00
36.80	1.25	0.09	0.00	77.60	1.25	0.09	0.00
37.60	1.25	0.09	0.00	78.40	1.25	0.09	0.00
38.40	1.25	0.09	0.00	79.20	1.25	0.09	0.00
39.20	1.25	0.09	0.00	80.00	1.25	0.09	0.00
40.00	1.25	0.09	0.00				

Summary for Subcatchment 53S: Basin 9 - Imp

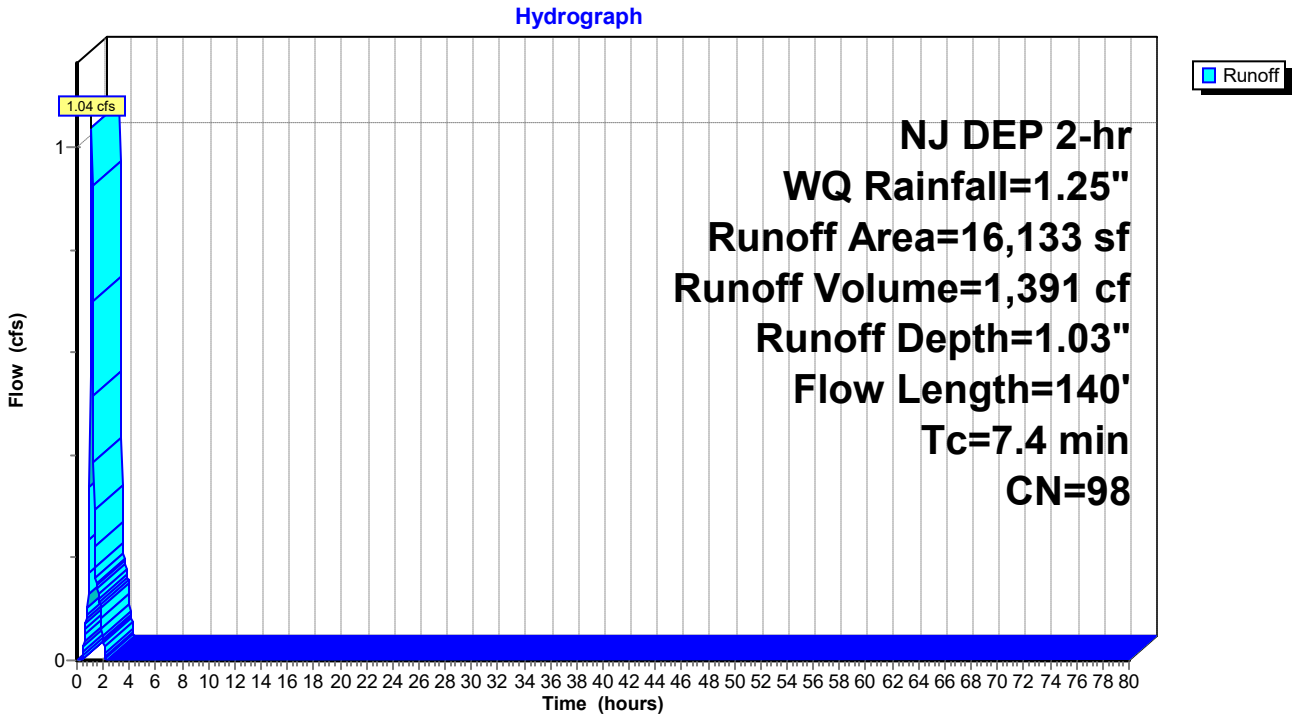
Runoff = 1.04 cfs @ 1.11 hrs, Volume= 1,391 cf, Depth= 1.03"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
6,889	98	Paved parking, HSG D
9,244	98	Paved parking, HSG C
16,133	98	Weighted Average
16,133		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 53S: Basin 9 - Imp



Hydrograph for Subcatchment 53S: Basin 9 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	1.03	0.00
0.80	0.23	0.09	**0.10**	41.60	1.25	1.03	0.00
1.60	**1.18**	**0.97**	**0.13**	42.40	1.25	1.03	0.00
2.40	**1.25**	**1.03**	0.00	43.20	1.25	1.03	0.00
3.20	1.25	1.03	0.00	44.00	1.25	1.03	0.00
4.00	1.25	1.03	0.00	44.80	1.25	1.03	0.00
4.80	1.25	1.03	0.00	45.60	1.25	1.03	0.00
5.60	1.25	1.03	0.00	46.40	1.25	1.03	0.00
6.40	1.25	1.03	0.00	47.20	1.25	1.03	0.00
7.20	1.25	1.03	0.00	48.00	1.25	1.03	0.00
8.00	1.25	1.03	0.00	48.80	1.25	1.03	0.00
8.80	1.25	1.03	0.00	49.60	1.25	1.03	0.00
9.60	1.25	1.03	0.00	50.40	1.25	1.03	0.00
10.40	1.25	1.03	0.00	51.20	1.25	1.03	0.00
11.20	1.25	1.03	0.00	52.00	1.25	1.03	0.00
12.00	1.25	1.03	0.00	52.80	1.25	1.03	0.00
12.80	1.25	1.03	0.00	53.60	1.25	1.03	0.00
13.60	1.25	1.03	0.00	54.40	1.25	1.03	0.00
14.40	1.25	1.03	0.00	55.20	1.25	1.03	0.00
15.20	1.25	1.03	0.00	56.00	1.25	1.03	0.00
16.00	1.25	1.03	0.00	56.80	1.25	1.03	0.00
16.80	1.25	1.03	0.00	57.60	1.25	1.03	0.00
17.60	1.25	1.03	0.00	58.40	1.25	1.03	0.00
18.40	1.25	1.03	0.00	59.20	1.25	1.03	0.00
19.20	1.25	1.03	0.00	60.00	1.25	1.03	0.00
20.00	1.25	1.03	0.00	60.80	1.25	1.03	0.00
20.80	1.25	1.03	0.00	61.60	1.25	1.03	0.00
21.60	1.25	1.03	0.00	62.40	1.25	1.03	0.00
22.40	1.25	1.03	0.00	63.20	1.25	1.03	0.00
23.20	1.25	1.03	0.00	64.00	1.25	1.03	0.00
24.00	1.25	1.03	0.00	64.80	1.25	1.03	0.00
24.80	1.25	1.03	0.00	65.60	1.25	1.03	0.00
25.60	1.25	1.03	0.00	66.40	1.25	1.03	0.00
26.40	1.25	1.03	0.00	67.20	1.25	1.03	0.00
27.20	1.25	1.03	0.00	68.00	1.25	1.03	0.00
28.00	1.25	1.03	0.00	68.80	1.25	1.03	0.00
28.80	1.25	1.03	0.00	69.60	1.25	1.03	0.00
29.60	1.25	1.03	0.00	70.40	1.25	1.03	0.00
30.40	1.25	1.03	0.00	71.20	1.25	1.03	0.00
31.20	1.25	1.03	0.00	72.00	1.25	1.03	0.00
32.00	1.25	1.03	0.00	72.80	1.25	1.03	0.00
32.80	1.25	1.03	0.00	73.60	1.25	1.03	0.00
33.60	1.25	1.03	0.00	74.40	1.25	1.03	0.00
34.40	1.25	1.03	0.00	75.20	1.25	1.03	0.00
35.20	1.25	1.03	0.00	76.00	1.25	1.03	0.00
36.00	1.25	1.03	0.00	76.80	1.25	1.03	0.00
36.80	1.25	1.03	0.00	77.60	1.25	1.03	0.00
37.60	1.25	1.03	0.00	78.40	1.25	1.03	0.00
38.40	1.25	1.03	0.00	79.20	1.25	1.03	0.00
39.20	1.25	1.03	0.00	80.00	1.25	1.03	0.00
40.00	1.25	1.03	0.00				

Summary for Subcatchment 54S: Basin 9 - Perv

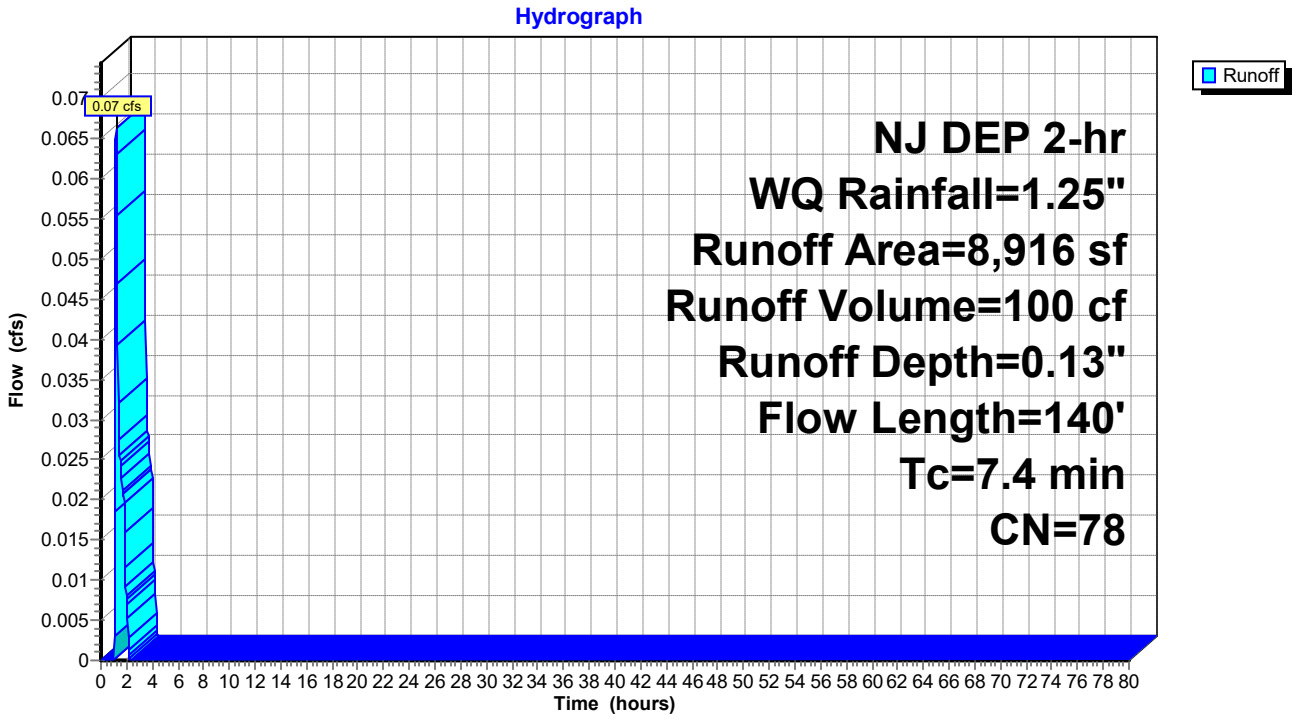
Runoff = 0.07 cfs @ 1.18 hrs, Volume= 100 cf, Depth= 0.13"
Routed to Pond 42P : Basin 9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description
2,537	74	>75% Grass cover, Good, HSG C
6,379	80	>75% Grass cover, Good, HSG D
8,916	78	Weighted Average
8,916		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.1000	0.23		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	40	0.0750	4.41		**Shallow Concentrated Flow, SCF (B-C)** Unpaved Kv= 16.1 fps
7.4	140	Total			

Subcatchment 54S: Basin 9 - Perv



Hydrograph for Subcatchment 54S: Basin 9 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	40.80	1.25	0.13	0.00
0.80	0.23	0.00	**0.00**	41.60	1.25	0.13	0.00
1.60	**1.18**	**0.11**	**0.02**	42.40	1.25	0.13	0.00
2.40	**1.25**	**0.13**	0.00	43.20	1.25	0.13	0.00
3.20	1.25	0.13	0.00	44.00	1.25	0.13	0.00
4.00	1.25	0.13	0.00	44.80	1.25	0.13	0.00
4.80	1.25	0.13	0.00	45.60	1.25	0.13	0.00
5.60	1.25	0.13	0.00	46.40	1.25	0.13	0.00
6.40	1.25	0.13	0.00	47.20	1.25	0.13	0.00
7.20	1.25	0.13	0.00	48.00	1.25	0.13	0.00
8.00	1.25	0.13	0.00	48.80	1.25	0.13	0.00
8.80	1.25	0.13	0.00	49.60	1.25	0.13	0.00
9.60	1.25	0.13	0.00	50.40	1.25	0.13	0.00
10.40	1.25	0.13	0.00	51.20	1.25	0.13	0.00
11.20	1.25	0.13	0.00	52.00	1.25	0.13	0.00
12.00	1.25	0.13	0.00	52.80	1.25	0.13	0.00
12.80	1.25	0.13	0.00	53.60	1.25	0.13	0.00
13.60	1.25	0.13	0.00	54.40	1.25	0.13	0.00
14.40	1.25	0.13	0.00	55.20	1.25	0.13	0.00
15.20	1.25	0.13	0.00	56.00	1.25	0.13	0.00
16.00	1.25	0.13	0.00	56.80	1.25	0.13	0.00
16.80	1.25	0.13	0.00	57.60	1.25	0.13	0.00
17.60	1.25	0.13	0.00	58.40	1.25	0.13	0.00
18.40	1.25	0.13	0.00	59.20	1.25	0.13	0.00
19.20	1.25	0.13	0.00	60.00	1.25	0.13	0.00
20.00	1.25	0.13	0.00	60.80	1.25	0.13	0.00
20.80	1.25	0.13	0.00	61.60	1.25	0.13	0.00
21.60	1.25	0.13	0.00	62.40	1.25	0.13	0.00
22.40	1.25	0.13	0.00	63.20	1.25	0.13	0.00
23.20	1.25	0.13	0.00	64.00	1.25	0.13	0.00
24.00	1.25	0.13	0.00	64.80	1.25	0.13	0.00
24.80	1.25	0.13	0.00	65.60	1.25	0.13	0.00
25.60	1.25	0.13	0.00	66.40	1.25	0.13	0.00
26.40	1.25	0.13	0.00	67.20	1.25	0.13	0.00
27.20	1.25	0.13	0.00	68.00	1.25	0.13	0.00
28.00	1.25	0.13	0.00	68.80	1.25	0.13	0.00
28.80	1.25	0.13	0.00	69.60	1.25	0.13	0.00
29.60	1.25	0.13	0.00	70.40	1.25	0.13	0.00
30.40	1.25	0.13	0.00	71.20	1.25	0.13	0.00
31.20	1.25	0.13	0.00	72.00	1.25	0.13	0.00
32.00	1.25	0.13	0.00	72.80	1.25	0.13	0.00
32.80	1.25	0.13	0.00	73.60	1.25	0.13	0.00
33.60	1.25	0.13	0.00	74.40	1.25	0.13	0.00
34.40	1.25	0.13	0.00	75.20	1.25	0.13	0.00
35.20	1.25	0.13	0.00	76.00	1.25	0.13	0.00
36.00	1.25	0.13	0.00	76.80	1.25	0.13	0.00
36.80	1.25	0.13	0.00	77.60	1.25	0.13	0.00
37.60	1.25	0.13	0.00	78.40	1.25	0.13	0.00
38.40	1.25	0.13	0.00	79.20	1.25	0.13	0.00
39.20	1.25	0.13	0.00	80.00	1.25	0.13	0.00
40.00	1.25	0.13	0.00				

Summary for Pond 21P: Basin 3

Inflow Area = 51,670 sf, 62.76% Impervious, Inflow Depth = 0.68" for WQ event
Inflow = 2.05 cfs @ 1.13 hrs, Volume= 2,914 cf
Outflow = 1.21 cfs @ 1.04 hrs, Volume= 2,914 cf, Atten= 41%, Lag= 0.0 min
Discarded = 1.21 cfs @ 1.04 hrs, Volume= 2,914 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 559.21' @ 1.24 hrs Surf.Area= 5,227 sf Storage= 449 cf

Plug-Flow detention time= 2.7 min calculated for 2,913 cf (100% of inflow)
Center-of-Mass det. time= 2.7 min (75.8 - 73.1)

Volume	Invert	Avail.Storage	Storage Description
#1	559.00'	4,537 cf	**Custom Stage Data (Prismatic)** Listed below 11,343 cf Overall x 40.0% Voids

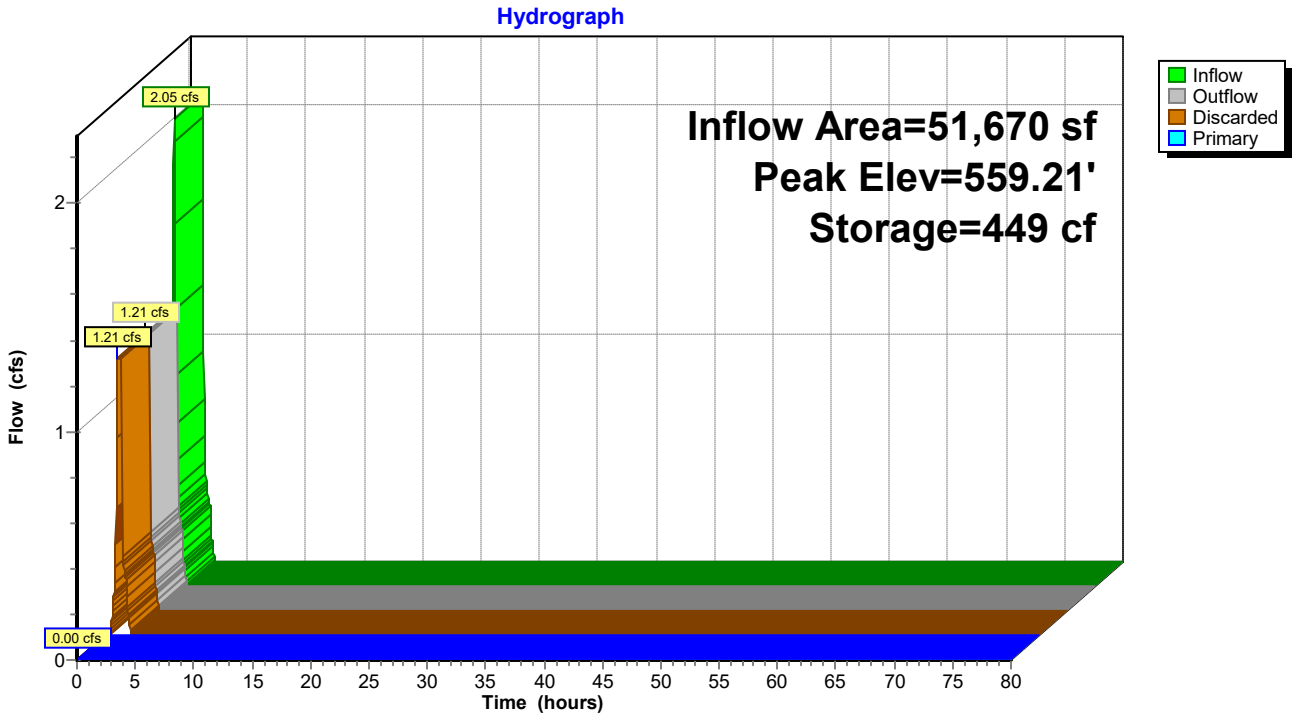
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
559.00	5,227	0	0
560.00	5,227	5,227	5,227
561.00	5,227	5,227	10,454
561.17	5,227	889	11,343

Device	Routing	Invert	Outlet Devices
#1	Primary	559.22'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	559.00'	**10.000 in/hr Exfiltration over Surface area**

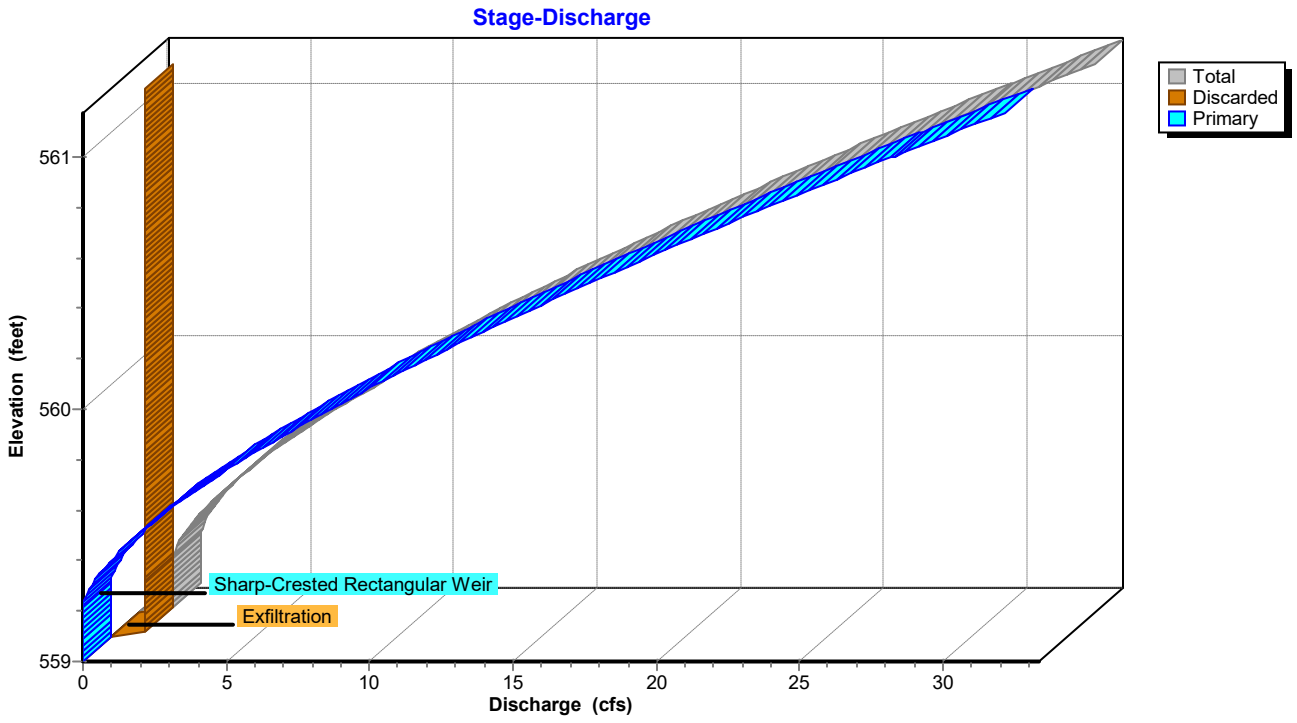
Discarded OutFlow Max=1.21 cfs @ 1.04 hrs HW=559.03' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.21 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=559.00' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 21P: Basin 3



Pond 21P: Basin 3



Hydrograph for Pond 21P: Basin 3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**559.00**	**0.00**	**0.00**	**0.00**
2.00	**0.09**	**4**	**559.00**	**0.09**	**0.09**	0.00
4.00	0.00	0	559.00	0.00	0.00	0.00
6.00	0.00	0	559.00	0.00	0.00	0.00
8.00	0.00	0	559.00	0.00	0.00	0.00
10.00	0.00	0	559.00	0.00	0.00	0.00
12.00	0.00	0	559.00	0.00	0.00	0.00
14.00	0.00	0	559.00	0.00	0.00	0.00
16.00	0.00	0	559.00	0.00	0.00	0.00
18.00	0.00	0	559.00	0.00	0.00	0.00
20.00	0.00	0	559.00	0.00	0.00	0.00
22.00	0.00	0	559.00	0.00	0.00	0.00
24.00	0.00	0	559.00	0.00	0.00	0.00
26.00	0.00	0	559.00	0.00	0.00	0.00
28.00	0.00	0	559.00	0.00	0.00	0.00
30.00	0.00	0	559.00	0.00	0.00	0.00
32.00	0.00	0	559.00	0.00	0.00	0.00
34.00	0.00	0	559.00	0.00	0.00	0.00
36.00	0.00	0	559.00	0.00	0.00	0.00
38.00	0.00	0	559.00	0.00	0.00	0.00
40.00	0.00	0	559.00	0.00	0.00	0.00
42.00	0.00	0	559.00	0.00	0.00	0.00
44.00	0.00	0	559.00	0.00	0.00	0.00
46.00	0.00	0	559.00	0.00	0.00	0.00
48.00	0.00	0	559.00	0.00	0.00	0.00
50.00	0.00	0	559.00	0.00	0.00	0.00
52.00	0.00	0	559.00	0.00	0.00	0.00
54.00	0.00	0	559.00	0.00	0.00	0.00
56.00	0.00	0	559.00	0.00	0.00	0.00
58.00	0.00	0	559.00	0.00	0.00	0.00
60.00	0.00	0	559.00	0.00	0.00	0.00
62.00	0.00	0	559.00	0.00	0.00	0.00
64.00	0.00	0	559.00	0.00	0.00	0.00
66.00	0.00	0	559.00	0.00	0.00	0.00
68.00	0.00	0	559.00	0.00	0.00	0.00
70.00	0.00	0	559.00	0.00	0.00	0.00
72.00	0.00	0	559.00	0.00	0.00	0.00
74.00	0.00	0	559.00	0.00	0.00	0.00
76.00	0.00	0	559.00	0.00	0.00	0.00
78.00	0.00	0	559.00	0.00	0.00	0.00
80.00	0.00	0	559.00	0.00	0.00	0.00

Stage-Discharge for Pond 21P: Basin 3

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
559.00	0.00	**0.00**	0.00
559.05	1.21	**1.21**	0.00
559.10	1.21	1.21	0.00
559.15	1.21	1.21	0.00
559.20	1.21	1.21	0.00
559.25	1.28	1.21	0.07
559.30	1.50	1.21	0.29
559.35	1.82	1.21	0.61
559.40	2.20	1.21	0.99
559.45	2.64	1.21	1.43
559.50	3.12	1.21	1.91
559.55	3.65	1.21	2.44
559.60	4.22	1.21	3.01
559.65	4.82	1.21	3.61
559.70	5.46	1.21	4.25
559.75	6.12	1.21	4.91
559.80	6.82	1.21	5.61
559.85	7.54	1.21	6.33
559.90	8.30	1.21	7.09
559.95	9.07	1.21	7.86
560.00	9.87	1.21	8.66
560.05	10.69	1.21	9.48
560.10	11.53	1.21	10.32
560.15	12.40	1.21	11.19
560.20	13.28	1.21	12.07
560.25	14.18	1.21	12.97
560.30	15.10	1.21	13.89
560.35	16.03	1.21	14.82
560.40	16.99	1.21	15.78
560.45	17.96	1.21	16.75
560.50	18.94	1.21	17.73
560.55	19.94	1.21	18.73
560.60	20.95	1.21	19.74
560.65	21.98	1.21	20.77
560.70	23.02	1.21	21.81
560.75	24.07	1.21	22.86
560.80	25.14	1.21	23.93
560.85	26.21	1.21	25.00
560.90	27.30	1.21	26.09
560.95	28.40	1.21	27.19
561.00	29.51	1.21	28.30
561.05	30.63	1.21	29.42
561.10	31.76	1.21	30.55
561.15	**32.90**	1.21	**31.69**

Stage-Area-Storage for Pond 21P: Basin 3

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
559.00	**5,227**	0
559.05	5,227	105
559.10	5,227	209
559.15	5,227	314
559.20	5,227	418
559.25	5,227	523
559.30	5,227	627
559.35	5,227	732
559.40	5,227	836
559.45	5,227	941
559.50	5,227	1,045
559.55	5,227	1,150
559.60	5,227	1,254
559.65	5,227	1,359
559.70	5,227	1,464
559.75	5,227	1,568
559.80	5,227	1,673
559.85	5,227	1,777
559.90	5,227	1,882
559.95	5,227	1,986
560.00	5,227	2,091
560.05	5,227	2,195
560.10	5,227	2,300
560.15	5,227	2,404
560.20	5,227	2,509
560.25	5,227	2,614
560.30	5,227	2,718
560.35	5,227	2,823
560.40	5,227	2,927
560.45	5,227	3,032
560.50	5,227	3,136
560.55	5,227	3,241
560.60	5,227	3,345
560.65	5,227	3,450
560.70	5,227	3,554
560.75	5,227	3,659
560.80	5,227	3,763
560.85	5,227	3,868
560.90	5,227	3,973
560.95	5,227	4,077
561.00	5,227	4,182
561.05	5,227	4,286
561.10	5,227	4,391
561.15	5,227	**4,495**

Summary for Pond 22P: Basin 4

Inflow Area = 57,587 sf, 86.93% Impervious, Inflow Depth = 0.91" for WQ event
Inflow = 3.35 cfs @ 1.10 hrs, Volume= 4,362 cf
Outflow = 1.13 cfs @ 1.00 hrs, Volume= 4,362 cf, Atten= 66%, Lag= 0.0 min
Discarded = 1.13 cfs @ 1.00 hrs, Volume= 4,362 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 27P : Basin 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 572.31' @ 1.26 hrs Surf.Area= 12,197 sf Storage= 1,514 cf

Plug-Flow detention time= 11.5 min calculated for 4,360 cf (100% of inflow)
Center-of-Mass det. time= 11.5 min (81.5 - 70.0)

Volume	Invert	Avail.Storage	Storage Description
#1	572.00'	14,197 cf	**Custom Stage Data (Prismatic)** Listed below 35,493 cf Overall x 40.0% Voids

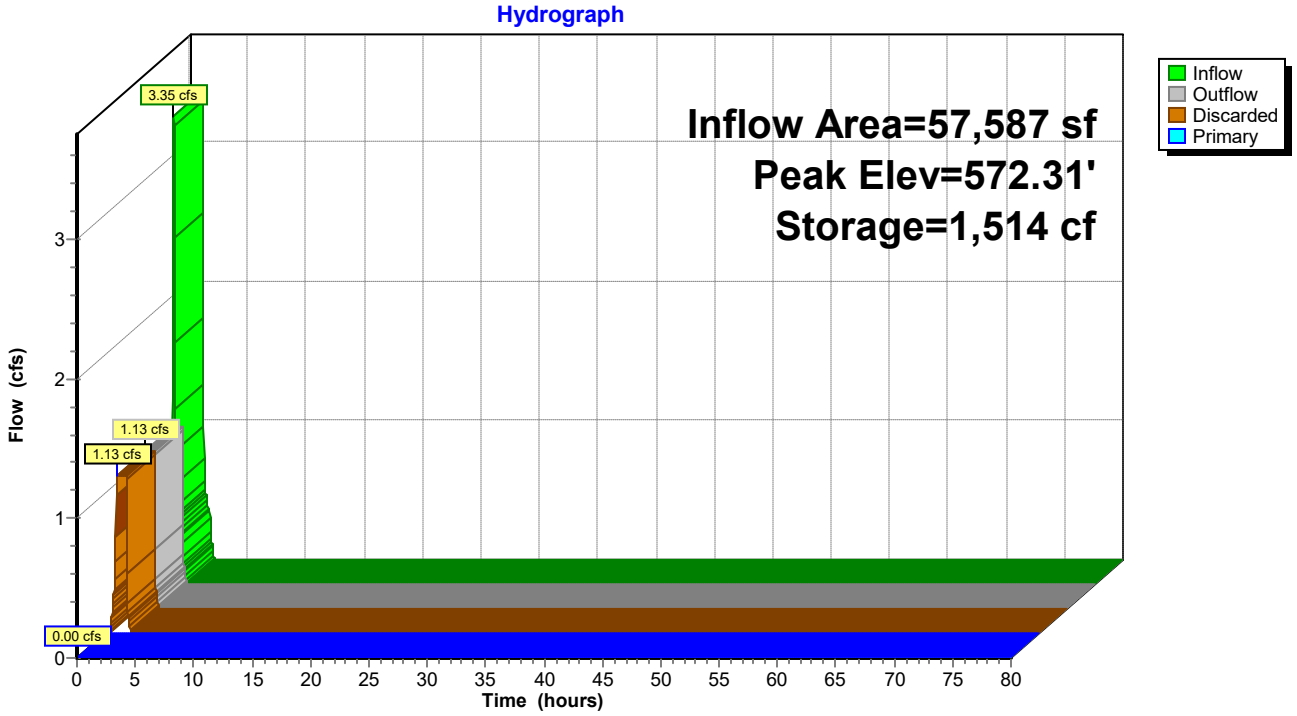
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
572.00	12,197	0	0
573.00	12,197	12,197	12,197
574.00	12,197	12,197	24,394
574.91	12,197	11,099	35,493

Device	Routing	Invert	Outlet Devices
#1	Primary	574.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	572.50'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	572.00'	**4.000 in/hr Exfiltration over Surface area**

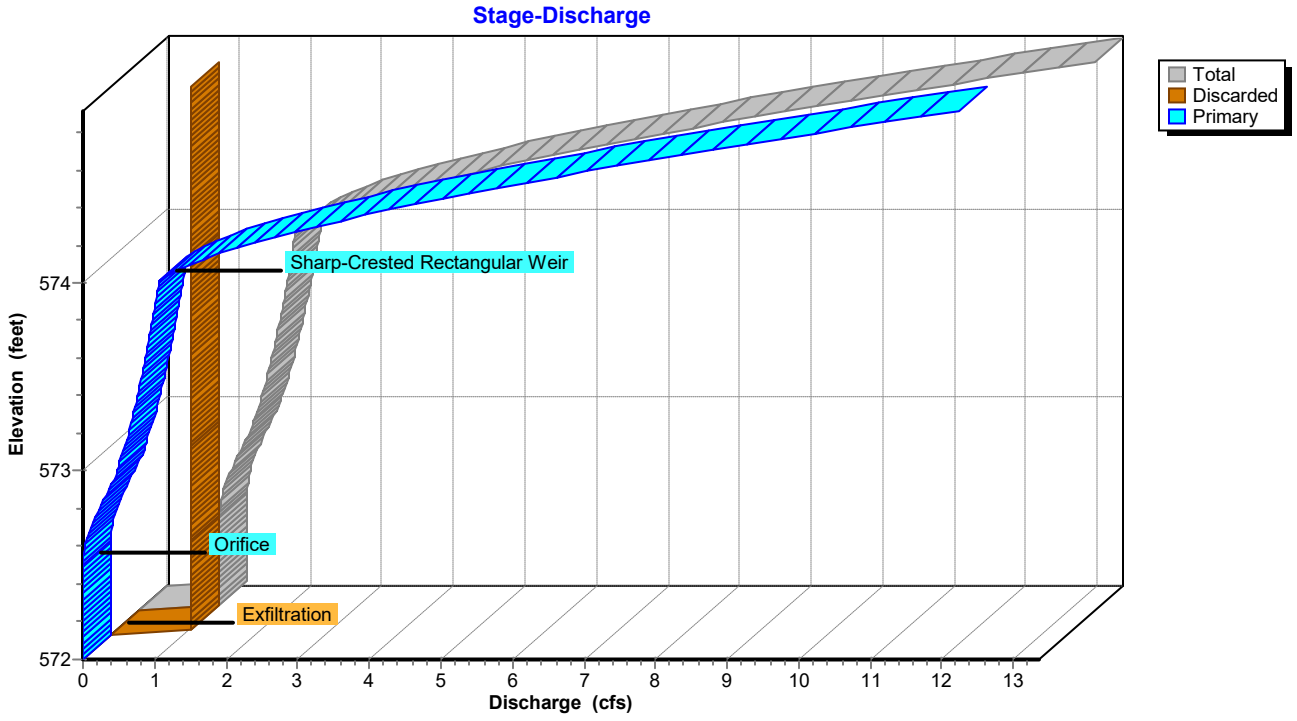
Discarded OutFlow Max=1.13 cfs @ 1.00 hrs HW=572.05' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.13 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=572.00' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Controls 0.00 cfs)

Pond 22P: Basin 4



Pond 22P: Basin 4



Hydrograph for Pond 22P: Basin 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**572.00**	**0.00**	**0.00**	**0.00**
2.00	**0.12**	**16**	**572.00**	**0.13**	**0.13**	0.00
4.00	0.00	0	572.00	0.00	0.00	0.00
6.00	0.00	0	572.00	0.00	0.00	0.00
8.00	0.00	0	572.00	0.00	0.00	0.00
10.00	0.00	0	572.00	0.00	0.00	0.00
12.00	0.00	0	572.00	0.00	0.00	0.00
14.00	0.00	0	572.00	0.00	0.00	0.00
16.00	0.00	0	572.00	0.00	0.00	0.00
18.00	0.00	0	572.00	0.00	0.00	0.00
20.00	0.00	0	572.00	0.00	0.00	0.00
22.00	0.00	0	572.00	0.00	0.00	0.00
24.00	0.00	0	572.00	0.00	0.00	0.00
26.00	0.00	0	572.00	0.00	0.00	0.00
28.00	0.00	0	572.00	0.00	0.00	0.00
30.00	0.00	0	572.00	0.00	0.00	0.00
32.00	0.00	0	572.00	0.00	0.00	0.00
34.00	0.00	0	572.00	0.00	0.00	0.00
36.00	0.00	0	572.00	0.00	0.00	0.00
38.00	0.00	0	572.00	0.00	0.00	0.00
40.00	0.00	0	572.00	0.00	0.00	0.00
42.00	0.00	0	572.00	0.00	0.00	0.00
44.00	0.00	0	572.00	0.00	0.00	0.00
46.00	0.00	0	572.00	0.00	0.00	0.00
48.00	0.00	0	572.00	0.00	0.00	0.00
50.00	0.00	0	572.00	0.00	0.00	0.00
52.00	0.00	0	572.00	0.00	0.00	0.00
54.00	0.00	0	572.00	0.00	0.00	0.00
56.00	0.00	0	572.00	0.00	0.00	0.00
58.00	0.00	0	572.00	0.00	0.00	0.00
60.00	0.00	0	572.00	0.00	0.00	0.00
62.00	0.00	0	572.00	0.00	0.00	0.00
64.00	0.00	0	572.00	0.00	0.00	0.00
66.00	0.00	0	572.00	0.00	0.00	0.00
68.00	0.00	0	572.00	0.00	0.00	0.00
70.00	0.00	0	572.00	0.00	0.00	0.00
72.00	0.00	0	572.00	0.00	0.00	0.00
74.00	0.00	0	572.00	0.00	0.00	0.00
76.00	0.00	0	572.00	0.00	0.00	0.00
78.00	0.00	0	572.00	0.00	0.00	0.00
80.00	0.00	0	572.00	0.00	0.00	0.00

Stage-Discharge for Pond 22P: Basin 4

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
572.00	0.00	**0.00**	0.00
572.05	1.13	**1.13**	0.00
572.10	1.13	1.13	0.00
572.15	1.13	1.13	0.00
572.20	1.13	1.13	0.00
572.25	1.13	1.13	0.00
572.30	1.13	1.13	0.00
572.35	1.13	1.13	0.00
572.40	1.13	1.13	0.00
572.45	1.13	1.13	0.00
572.50	1.13	1.13	0.00
572.55	1.14	1.13	0.01
572.60	1.16	1.13	0.03
572.65	1.19	1.13	0.07
572.70	1.24	1.13	0.11
572.75	1.30	1.13	0.17
572.80	1.36	1.13	0.23
572.85	1.43	1.13	0.30
572.90	1.49	1.13	0.36
572.95	1.55	1.13	0.43
573.00	1.60	1.13	0.47
573.05	1.65	1.13	0.52
573.10	1.69	1.13	0.56
573.15	1.73	1.13	0.60
573.20	1.76	1.13	0.63
573.25	1.80	1.13	0.67
573.30	1.83	1.13	0.70
573.35	1.86	1.13	0.73
573.40	1.89	1.13	0.76
573.45	1.92	1.13	0.79
573.50	1.95	1.13	0.82
573.55	1.97	1.13	0.85
573.60	2.00	1.13	0.87
573.65	2.03	1.13	0.90
573.70	2.05	1.13	0.92
573.75	2.07	1.13	0.95
573.80	2.10	1.13	0.97
573.85	2.12	1.13	0.99
573.90	2.14	1.13	1.01
573.95	2.17	1.13	1.04
574.00	2.19	1.13	1.06
574.05	2.35	1.13	1.22
574.10	2.64	1.13	1.51
574.15	3.00	1.13	1.87
574.20	3.43	1.13	2.30
574.25	3.90	1.13	2.77
574.30	4.42	1.13	3.29
574.35	4.99	1.13	3.86
574.40	5.59	1.13	4.46
574.45	6.22	1.13	5.09
574.50	6.89	1.13	5.76
574.55	7.59	1.13	6.46
574.60	8.31	1.13	7.18
574.65	9.06	1.13	7.93
574.70	9.84	1.13	8.71
574.75	10.64	1.13	9.51
574.80	11.47	1.13	10.34
574.85	12.31	1.13	11.18
574.90	**13.18**	1.13	**12.05**

Stage-Area-Storage for Pond 22P: Basin 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
572.00	**12,197**	0
572.05	12,197	244
572.10	12,197	488
572.15	12,197	732
572.20	12,197	976
572.25	12,197	1,220
572.30	12,197	1,464
572.35	12,197	1,708
572.40	12,197	1,952
572.45	12,197	2,195
572.50	12,197	2,439
572.55	12,197	2,683
572.60	12,197	2,927
572.65	12,197	3,171
572.70	12,197	3,415
572.75	12,197	3,659
572.80	12,197	3,903
572.85	12,197	4,147
572.90	12,197	4,391
572.95	12,197	4,635
573.00	12,197	4,879
573.05	12,197	5,123
573.10	12,197	5,367
573.15	12,197	5,611
573.20	12,197	5,855
573.25	12,197	6,099
573.30	12,197	6,342
573.35	12,197	6,586
573.40	12,197	6,830
573.45	12,197	7,074
573.50	12,197	7,318
573.55	12,197	7,562
573.60	12,197	7,806
573.65	12,197	8,050
573.70	12,197	8,294
573.75	12,197	8,538
573.80	12,197	8,782
573.85	12,197	9,026
573.90	12,197	9,270
573.95	12,197	9,514
574.00	12,197	9,758
574.05	12,197	10,002
574.10	12,197	10,245
574.15	12,197	10,489
574.20	12,197	10,733
574.25	12,197	10,977
574.30	12,197	11,221
574.35	12,197	11,465
574.40	12,197	11,709
574.45	12,197	11,953
574.50	12,197	12,197
574.55	12,197	12,441
574.60	12,197	12,685
574.65	12,197	12,929
574.70	12,197	13,173
574.75	12,197	13,417
574.80	12,197	13,661
574.85	12,197	13,905
574.90	12,197	**14,149**

Summary for Pond 27P: Basin 2

Inflow Area = 217,925 sf, 51.70% Impervious, Inflow Depth = 0.19" for WQ event
Inflow = 2.15 cfs @ 1.17 hrs, Volume= 3,479 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 544.13' @ 2.64 hrs Surf.Area= 26,344 sf Storage= 3,479 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

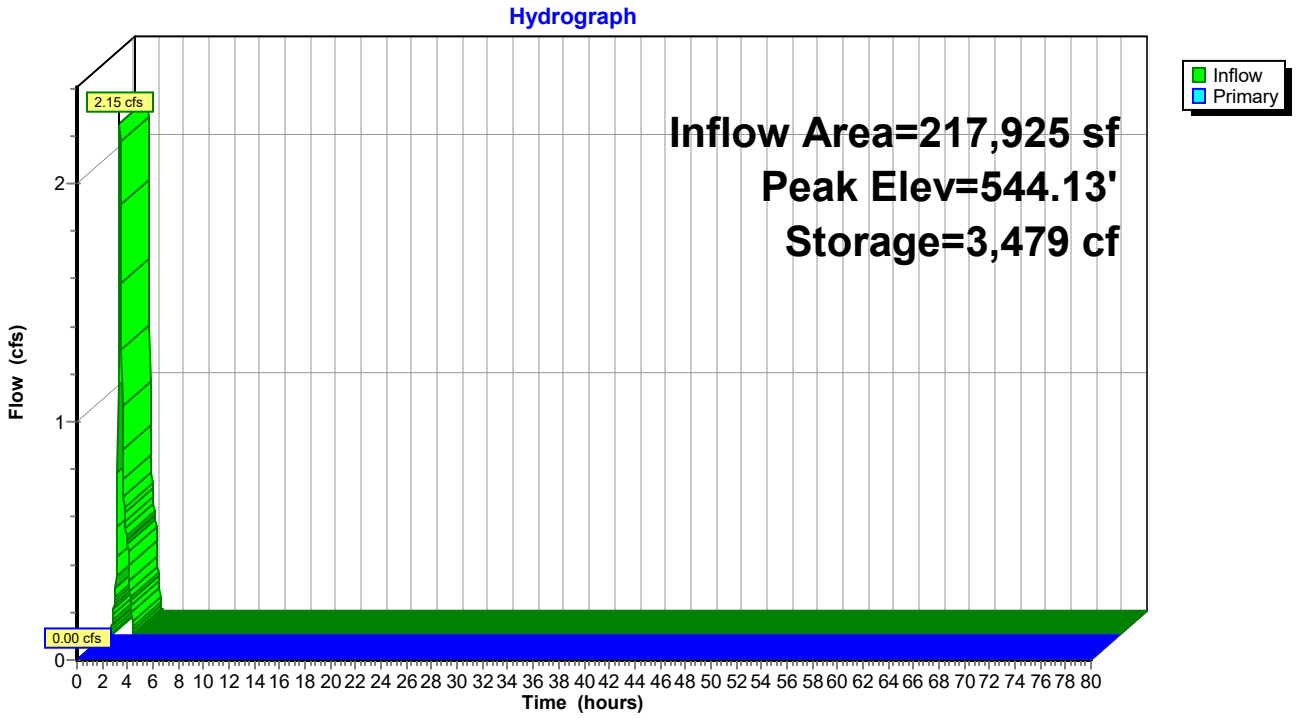
Volume	Invert	Avail.Storage	Storage Description
#1	544.00'	56,873 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
544.00	26,023	0	0
546.00	30,850	56,873	56,873

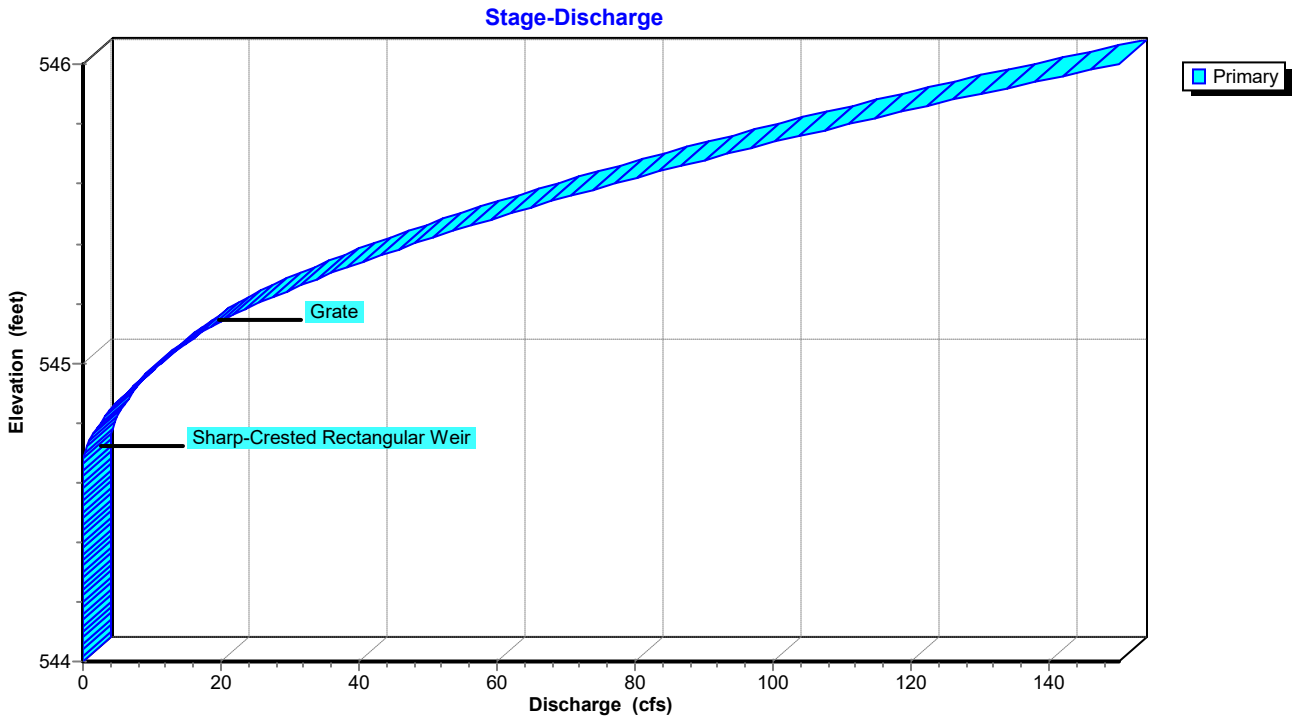
Device	Routing	Invert	Outlet Devices
#1	Primary	545.10'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	544.68'	**18.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.7' Crest Height

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=544.00' (Free Discharge)
1=Grate (Controls 0.00 cfs)
2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 27P: Basin 2



Pond 27P: Basin 2



Hydrograph for Pond 27P: Basin 2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	**0.00**	0	544.00	**0.00**
2.00	**0.16**	**3,394**	**544.13**	0.00
4.00	0.00	**3,479**	**544.13**	0.00
6.00	0.00	3,479	544.13	0.00
8.00	0.00	3,479	544.13	0.00
10.00	0.00	3,479	544.13	0.00
12.00	0.00	3,479	544.13	0.00
14.00	0.00	3,479	544.13	0.00
16.00	0.00	3,479	544.13	0.00
18.00	0.00	3,479	544.13	0.00
20.00	0.00	3,479	544.13	0.00
22.00	0.00	3,479	544.13	0.00
24.00	0.00	3,479	544.13	0.00
26.00	0.00	3,479	544.13	0.00
28.00	0.00	3,479	544.13	0.00
30.00	0.00	3,479	544.13	0.00
32.00	0.00	3,479	544.13	0.00
34.00	0.00	3,479	544.13	0.00
36.00	0.00	3,479	544.13	0.00
38.00	0.00	3,479	544.13	0.00
40.00	0.00	3,479	544.13	0.00
42.00	0.00	3,479	544.13	0.00
44.00	0.00	3,479	544.13	0.00
46.00	0.00	3,479	544.13	0.00
48.00	0.00	3,479	544.13	0.00
50.00	0.00	3,479	544.13	0.00
52.00	0.00	3,479	544.13	0.00
54.00	0.00	3,479	544.13	0.00
56.00	0.00	3,479	544.13	0.00
58.00	0.00	3,479	544.13	0.00
60.00	0.00	3,479	544.13	0.00
62.00	0.00	3,479	544.13	0.00
64.00	0.00	3,479	544.13	0.00
66.00	0.00	3,479	544.13	0.00
68.00	0.00	3,479	544.13	0.00
70.00	0.00	3,479	544.13	0.00
72.00	0.00	3,479	544.13	0.00
74.00	0.00	3,479	544.13	0.00
76.00	0.00	3,479	544.13	0.00
78.00	0.00	3,479	544.13	0.00
80.00	0.00	3,479	544.13	0.00

Stage-Discharge for Pond 27P: Basin 2

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
544.00	0.00	544.51	0.00	545.02	12.32	545.53	66.31
544.01	0.00	544.52	0.00	545.03	12.88	545.54	67.80
544.02	0.00	544.53	0.00	545.04	13.46	545.55	69.30
544.03	0.00	544.54	0.00	545.05	14.05	545.56	70.82
544.04	0.00	544.55	0.00	545.06	14.64	545.57	72.35
544.05	0.00	544.56	0.00	545.07	15.25	545.58	73.89
544.06	0.00	544.57	0.00	545.08	15.86	545.59	75.45
544.07	0.00	544.58	0.00	545.09	16.48	545.60	77.02
544.08	0.00	544.59	0.00	545.10	17.12	545.61	78.60
544.09	0.00	544.60	0.00	545.11	17.81	545.62	80.19
544.10	0.00	544.61	0.00	545.12	18.55	545.63	81.80
544.11	0.00	544.62	0.00	545.13	19.32	545.64	83.43
544.12	0.00	544.63	0.00	545.14	20.13	545.65	85.06
544.13	0.00	544.64	0.00	545.15	20.96	545.66	86.71
544.14	0.00	544.65	0.00	545.16	21.82	545.67	88.37
544.15	0.00	544.66	0.00	545.17	22.71	545.68	90.04
544.16	0.00	544.67	0.00	545.18	23.61	545.69	91.73
544.17	0.00	544.68	0.00	545.19	24.54	545.70	93.43
544.18	0.00	544.69	0.06	545.20	25.49	545.71	95.14
544.19	0.00	544.70	0.17	545.21	26.46	545.72	96.87
544.20	0.00	544.71	0.31	545.22	27.45	545.73	98.60
544.21	0.00	544.72	0.47	545.23	28.45	545.74	100.35
544.22	0.00	544.73	0.66	545.24	29.48	545.75	102.11
544.23	0.00	544.74	0.87	545.25	30.53	545.76	103.89
544.24	0.00	544.75	1.10	545.26	31.59	545.77	105.68
544.25	0.00	544.76	1.35	545.27	32.67	545.78	107.47
544.26	0.00	544.77	1.61	545.28	33.77	545.79	109.29
544.27	0.00	544.78	1.89	545.29	34.88	545.80	111.11
544.28	0.00	544.79	2.19	545.30	36.02	545.81	112.95
544.29	0.00	544.80	2.49	545.31	37.16	545.82	114.79
544.30	0.00	544.81	2.82	545.32	38.33	545.83	116.65
544.31	0.00	544.82	3.15	545.33	39.51	545.84	118.53
544.32	0.00	544.83	3.50	545.34	40.71	545.85	120.41
544.33	0.00	544.84	3.87	545.35	41.92	545.86	122.31
544.34	0.00	544.85	4.24	545.36	43.15	545.87	124.22
544.35	0.00	544.86	4.63	545.37	44.40	545.88	126.14
544.36	0.00	544.87	5.03	545.38	45.66	545.89	128.07
544.37	0.00	544.88	5.44	545.39	46.93	545.90	130.02
544.38	0.00	544.89	5.86	545.40	48.22	545.91	131.98
544.39	0.00	544.90	6.29	545.41	49.53	545.92	133.94
544.40	0.00	544.91	6.74	545.42	50.84	545.93	135.93
544.41	0.00	544.92	7.19	545.43	52.18	545.94	137.92
544.42	0.00	544.93	7.66	545.44	53.53	545.95	139.92
544.43	0.00	544.94	8.13	545.45	54.89	545.96	141.94
544.44	0.00	544.95	8.62	545.46	56.27	545.97	143.97
544.45	0.00	544.96	9.12	545.47	57.66	545.98	146.01
544.46	0.00	544.97	9.63	545.48	59.07	545.99	148.06
544.47	0.00	544.98	10.14	545.49	60.49	546.00	**150.12**
544.48	0.00	544.99	10.67	545.50	61.92		
544.49	0.00	545.00	11.21	545.51	63.37		
544.50	0.00	545.01	11.76	545.52	64.83		

Stage-Area-Storage for Pond 27P: Basin 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
544.00	26,023	0	545.02	28,485	27,799
544.02	26,071	521	545.04	28,533	28,369
544.04	26,120	1,043	545.06	28,581	28,940
544.06	26,168	1,566	545.08	28,630	29,512
544.08	26,216	2,090	545.10	28,678	30,085
544.10	26,264	2,614	545.12	28,726	30,660
544.12	26,313	3,140	545.14	28,774	31,235
544.14	26,361	3,667	545.16	28,823	31,810
544.16	26,409	4,195	545.18	28,871	32,387
544.18	26,457	4,723	545.20	28,919	32,965
544.20	26,506	5,253	545.22	28,967	33,544
544.22	26,554	5,783	545.24	29,016	34,124
544.24	26,602	6,315	545.26	29,064	34,705
544.26	26,651	6,848	545.28	29,112	35,287
544.28	26,699	7,381	545.30	29,161	35,869
544.30	26,747	7,916	545.32	29,209	36,453
544.32	26,795	8,451	545.34	29,257	37,038
544.34	26,844	8,987	545.36	29,305	37,623
544.36	26,892	9,525	545.38	29,354	38,210
544.38	26,940	10,063	545.40	29,402	38,797
544.40	26,988	10,602	545.42	29,450	39,386
544.42	27,037	11,143	545.44	29,498	39,975
544.44	27,085	11,684	545.46	29,547	40,566
544.46	27,133	12,226	545.48	29,595	41,157
544.48	27,181	12,769	545.50	29,643	41,750
544.50	27,230	13,313	545.52	29,692	42,343
544.52	27,278	13,858	545.54	29,740	42,937
544.54	27,326	14,404	545.56	29,788	43,533
544.56	27,375	14,951	545.58	29,836	44,129
544.58	27,423	15,499	545.60	29,885	44,726
544.60	27,471	16,048	545.62	29,933	45,324
544.62	27,519	16,598	545.64	29,981	45,923
544.64	27,568	17,149	545.66	30,029	46,524
544.66	27,616	17,701	545.68	30,078	47,125
544.68	27,664	18,254	545.70	30,126	47,727
544.70	27,712	18,807	545.72	30,174	48,330
544.72	27,761	19,362	545.74	30,222	48,934
544.74	27,809	19,918	545.76	30,271	49,539
544.76	27,857	20,474	545.78	30,319	50,144
544.78	27,906	21,032	545.80	30,367	50,751
544.80	27,954	21,591	545.82	30,416	51,359
544.82	28,002	22,150	545.84	30,464	51,968
544.84	28,050	22,711	545.86	30,512	52,578
544.86	28,099	23,272	545.88	30,560	53,188
544.88	28,147	23,835	545.90	30,609	53,800
544.90	28,195	24,398	545.92	30,657	54,413
544.92	28,243	24,963	545.94	30,705	55,026
544.94	28,292	25,528	545.96	30,753	55,641
544.96	28,340	26,094	545.98	30,802	56,256
544.98	28,388	26,662	546.00	**30,850**	**56,873**
545.00	28,437	27,230			

Summary for Pond 33P: Basin 11

Inflow Area = 84,693 sf, 77.02% Impervious, Inflow Depth = 0.82" for WQ event
Inflow = 3.93 cfs @ 1.15 hrs, Volume= 5,765 cf
Outflow = 3.13 cfs @ 1.12 hrs, Volume= 5,765 cf, Atten= 20%, Lag= 0.0 min
Discarded = 3.13 cfs @ 1.12 hrs, Volume= 5,765 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 590.07' @ 1.22 hrs Surf.Area= 13,504 sf Storage= 384 cf

Plug-Flow detention time= 1.1 min calculated for 5,762 cf (100% of inflow)
Center-of-Mass det. time= 1.1 min (75.3 - 74.2)

Volume	Invert	Avail.Storage	Storage Description
#1	590.00'	13,072 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 32,680 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
590.00	13,504	0	0
591.00	13,504	13,504	13,504
592.00	13,504	13,504	27,008
592.42	13,504	5,672	32,680

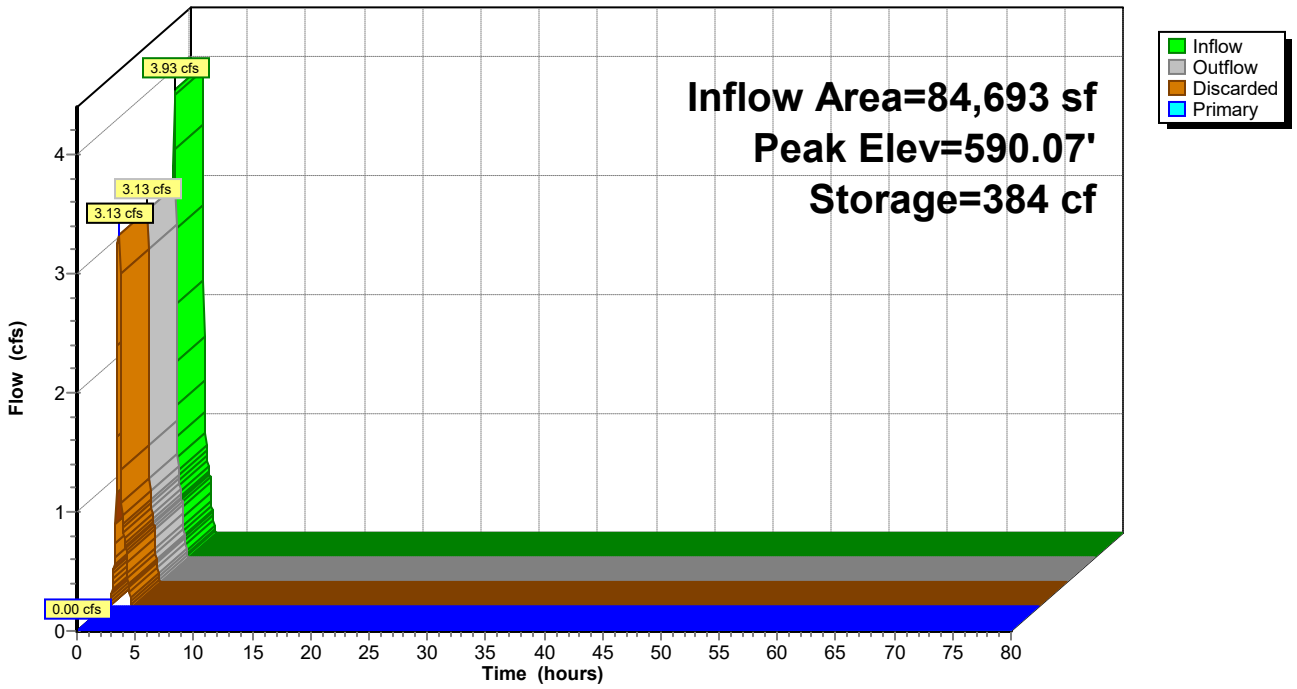
Device	Routing	Invert	Outlet Devices
#1	Primary	590.10'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	590.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=3.13 cfs @ 1.12 hrs HW=590.04' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 3.13 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=590.00' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

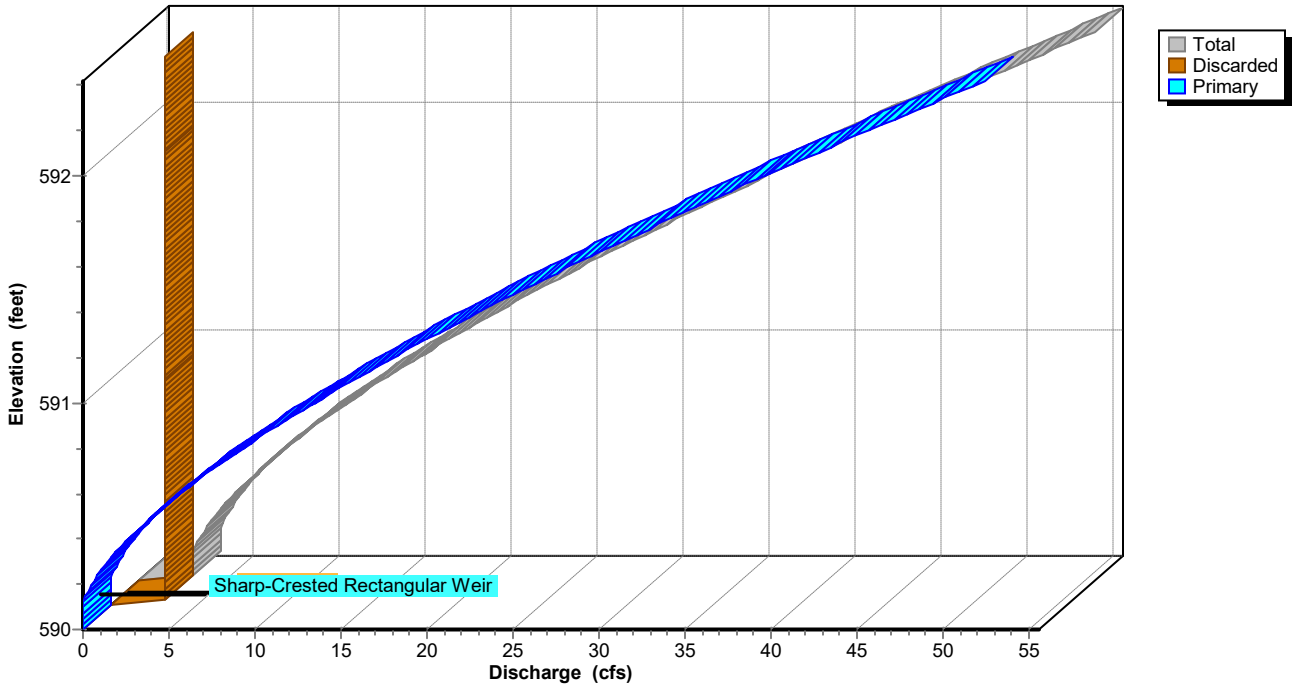
Pond 33P: Basin 11

Hydrograph



Pond 33P: Basin 11

Stage-Discharge



Hydrograph for Pond 33P: Basin 11

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**590.00**	**0.00**	**0.00**	**0.00**
2.00	**0.19**	**8**	**590.00**	**0.20**	**0.20**	0.00
4.00	0.00	0	590.00	0.00	0.00	0.00
6.00	0.00	0	590.00	0.00	0.00	0.00
8.00	0.00	0	590.00	0.00	0.00	0.00
10.00	0.00	0	590.00	0.00	0.00	0.00
12.00	0.00	0	590.00	0.00	0.00	0.00
14.00	0.00	0	590.00	0.00	0.00	0.00
16.00	0.00	0	590.00	0.00	0.00	0.00
18.00	0.00	0	590.00	0.00	0.00	0.00
20.00	0.00	0	590.00	0.00	0.00	0.00
22.00	0.00	0	590.00	0.00	0.00	0.00
24.00	0.00	0	590.00	0.00	0.00	0.00
26.00	0.00	0	590.00	0.00	0.00	0.00
28.00	0.00	0	590.00	0.00	0.00	0.00
30.00	0.00	0	590.00	0.00	0.00	0.00
32.00	0.00	0	590.00	0.00	0.00	0.00
34.00	0.00	0	590.00	0.00	0.00	0.00
36.00	0.00	0	590.00	0.00	0.00	0.00
38.00	0.00	0	590.00	0.00	0.00	0.00
40.00	0.00	0	590.00	0.00	0.00	0.00
42.00	0.00	0	590.00	0.00	0.00	0.00
44.00	0.00	0	590.00	0.00	0.00	0.00
46.00	0.00	0	590.00	0.00	0.00	0.00
48.00	0.00	0	590.00	0.00	0.00	0.00
50.00	0.00	0	590.00	0.00	0.00	0.00
52.00	0.00	0	590.00	0.00	0.00	0.00
54.00	0.00	0	590.00	0.00	0.00	0.00
56.00	0.00	0	590.00	0.00	0.00	0.00
58.00	0.00	0	590.00	0.00	0.00	0.00
60.00	0.00	0	590.00	0.00	0.00	0.00
62.00	0.00	0	590.00	0.00	0.00	0.00
64.00	0.00	0	590.00	0.00	0.00	0.00
66.00	0.00	0	590.00	0.00	0.00	0.00
68.00	0.00	0	590.00	0.00	0.00	0.00
70.00	0.00	0	590.00	0.00	0.00	0.00
72.00	0.00	0	590.00	0.00	0.00	0.00
74.00	0.00	0	590.00	0.00	0.00	0.00
76.00	0.00	0	590.00	0.00	0.00	0.00
78.00	0.00	0	590.00	0.00	0.00	0.00
80.00	0.00	0	590.00	0.00	0.00	0.00

Stage-Discharge for Pond 33P: Basin 11

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
590.00	0.00	**0.00**	0.00
590.05	3.13	**3.13**	0.00
590.10	3.13	3.13	0.00
590.15	3.31	3.13	0.18
590.20	3.64	3.13	0.51
590.25	4.07	3.13	0.94
590.30	4.58	3.13	1.45
590.35	5.15	3.13	2.02
590.40	5.78	3.13	2.65
590.45	6.46	3.13	3.34
590.50	7.20	3.13	4.07
590.55	7.97	3.13	4.85
590.60	8.79	3.13	5.66
590.65	9.65	3.13	6.52
590.70	10.54	3.13	7.42
590.75	11.47	3.13	8.35
590.80	12.43	3.13	9.31
590.85	13.43	3.13	10.30
590.90	14.45	3.13	11.32
590.95	15.50	3.13	12.38
591.00	16.58	3.13	13.46
591.05	17.69	3.13	14.56
591.10	18.82	3.13	15.70
591.15	19.98	3.13	16.85
591.20	21.16	3.13	18.03
591.25	22.36	3.13	19.24
591.30	23.59	3.13	20.46
591.35	24.83	3.13	21.71
591.40	26.10	3.13	22.97
591.45	27.39	3.13	24.26
591.50	28.69	3.13	25.57
591.55	30.02	3.13	26.89
591.60	31.36	3.13	28.23
591.65	32.72	3.13	29.59
591.70	34.10	3.13	30.97
591.75	35.49	3.13	32.37
591.80	36.90	3.13	33.78
591.85	38.33	3.13	35.20
591.90	39.77	3.13	36.64
591.95	41.22	3.13	38.10
592.00	42.69	3.13	39.57
592.05	44.17	3.13	41.05
592.10	45.67	3.13	42.55
592.15	47.18	3.13	44.05
592.20	48.70	3.13	45.58
592.25	50.24	3.13	47.11
592.30	51.78	3.13	48.66
592.35	53.34	3.13	50.21
592.40	**54.91**	3.13	**51.78**

Stage-Area-Storage for Pond 33P: Basin 11

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
590.00	**13,504**	0
590.05	13,504	270
590.10	13,504	540
590.15	13,504	810
590.20	13,504	1,080
590.25	13,504	1,350
590.30	13,504	1,620
590.35	13,504	1,891
590.40	13,504	2,161
590.45	13,504	2,431
590.50	13,504	2,701
590.55	13,504	2,971
590.60	13,504	3,241
590.65	13,504	3,511
590.70	13,504	3,781
590.75	13,504	4,051
590.80	13,504	4,321
590.85	13,504	4,591
590.90	13,504	4,861
590.95	13,504	5,132
591.00	13,504	5,402
591.05	13,504	5,672
591.10	13,504	5,942
591.15	13,504	6,212
591.20	13,504	6,482
591.25	13,504	6,752
591.30	13,504	7,022
591.35	13,504	7,292
591.40	13,504	7,562
591.45	13,504	7,832
591.50	13,504	8,102
591.55	13,504	8,372
591.60	13,504	8,643
591.65	13,504	8,913
591.70	13,504	9,183
591.75	13,504	9,453
591.80	13,504	9,723
591.85	13,504	9,993
591.90	13,504	10,263
591.95	13,504	10,533
592.00	13,504	10,803
592.05	13,504	11,073
592.10	13,504	11,343
592.15	13,504	11,613
592.20	13,504	11,884
592.25	13,504	12,154
592.30	13,504	12,424
592.35	13,504	12,694
592.40	13,504	**12,964**

Summary for Pond 41P: Basin 10

Inflow Area = 97,058 sf, 61.64% Impervious, Inflow Depth = 0.67" for WQ event
Inflow = 3.54 cfs @ 1.16 hrs, Volume= 5,427 cf
Outflow = 2.22 cfs @ 1.12 hrs, Volume= 5,427 cf, Atten= 37%, Lag= 0.0 min
Discarded = 2.22 cfs @ 1.12 hrs, Volume= 5,427 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 576.09' @ 1.28 hrs Surf.Area= 9,583 sf Storage= 900 cf

Plug-Flow detention time= 3.7 min calculated for 5,424 cf (100% of inflow)
Center-of-Mass det. time= 3.7 min (79.2 - 75.5)

Volume	Invert	Avail.Storage	Storage Description
#1	576.00'	28,749 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
576.00	9,583	0	0
577.00	9,583	9,583	9,583
578.00	9,583	9,583	19,166
579.00	9,583	9,583	28,749

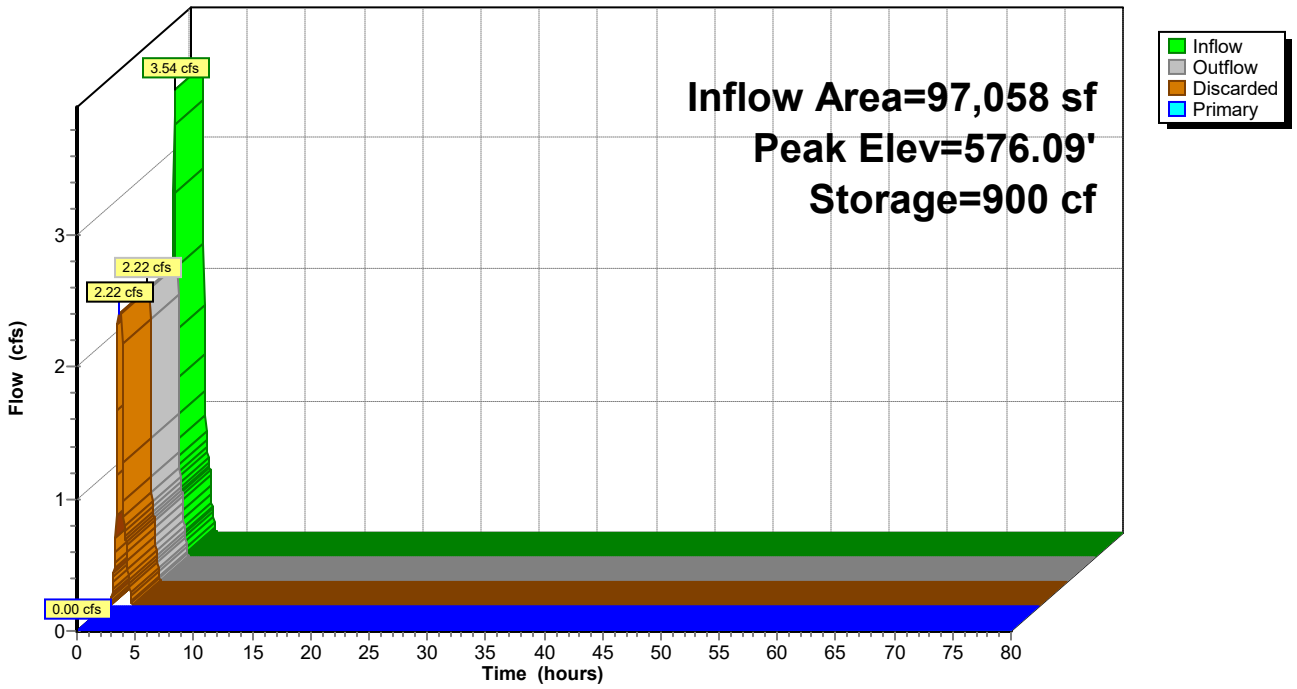
Device	Routing	Invert	Outlet Devices
#1	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	576.15'	**42.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	576.00'	**10.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=2.22 cfs @ 1.12 hrs HW=576.04' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 2.22 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=576.00' (Free Discharge)
├**1=Grate** (Controls 0.00 cfs)
└**2=Grate** (Controls 0.00 cfs)

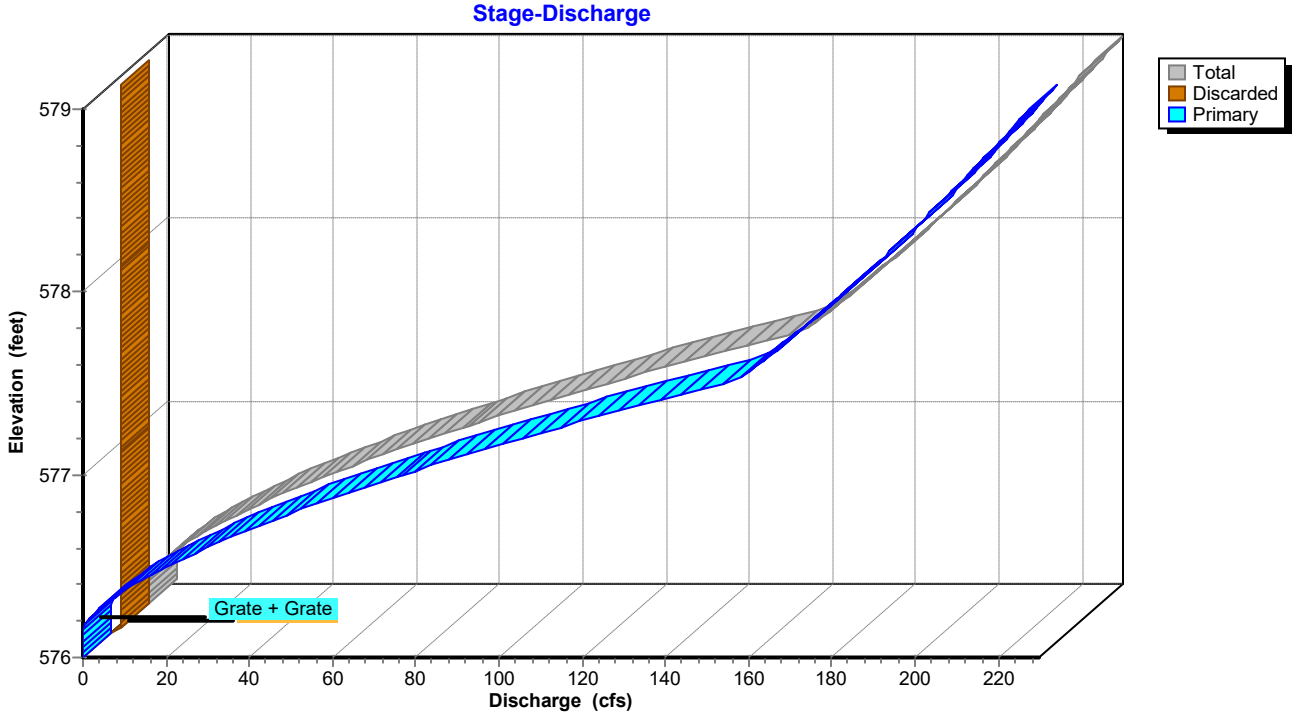
Pond 41P: Basin 10

Hydrograph



Pond 41P: Basin 10

Stage-Discharge



Hydrograph for Pond 41P: Basin 10

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**576.00**	**0.00**	**0.00**	**0.00**
2.00	**0.20**	**31**	**576.00**	**0.24**	**0.24**	0.00
4.00	0.00	0	576.00	0.00	0.00	0.00
6.00	0.00	0	576.00	0.00	0.00	0.00
8.00	0.00	0	576.00	0.00	0.00	0.00
10.00	0.00	0	576.00	0.00	0.00	0.00
12.00	0.00	0	576.00	0.00	0.00	0.00
14.00	0.00	0	576.00	0.00	0.00	0.00
16.00	0.00	0	576.00	0.00	0.00	0.00
18.00	0.00	0	576.00	0.00	0.00	0.00
20.00	0.00	0	576.00	0.00	0.00	0.00
22.00	0.00	0	576.00	0.00	0.00	0.00
24.00	0.00	0	576.00	0.00	0.00	0.00
26.00	0.00	0	576.00	0.00	0.00	0.00
28.00	0.00	0	576.00	0.00	0.00	0.00
30.00	0.00	0	576.00	0.00	0.00	0.00
32.00	0.00	0	576.00	0.00	0.00	0.00
34.00	0.00	0	576.00	0.00	0.00	0.00
36.00	0.00	0	576.00	0.00	0.00	0.00
38.00	0.00	0	576.00	0.00	0.00	0.00
40.00	0.00	0	576.00	0.00	0.00	0.00
42.00	0.00	0	576.00	0.00	0.00	0.00
44.00	0.00	0	576.00	0.00	0.00	0.00
46.00	0.00	0	576.00	0.00	0.00	0.00
48.00	0.00	0	576.00	0.00	0.00	0.00
50.00	0.00	0	576.00	0.00	0.00	0.00
52.00	0.00	0	576.00	0.00	0.00	0.00
54.00	0.00	0	576.00	0.00	0.00	0.00
56.00	0.00	0	576.00	0.00	0.00	0.00
58.00	0.00	0	576.00	0.00	0.00	0.00
60.00	0.00	0	576.00	0.00	0.00	0.00
62.00	0.00	0	576.00	0.00	0.00	0.00
64.00	0.00	0	576.00	0.00	0.00	0.00
66.00	0.00	0	576.00	0.00	0.00	0.00
68.00	0.00	0	576.00	0.00	0.00	0.00
70.00	0.00	0	576.00	0.00	0.00	0.00
72.00	0.00	0	576.00	0.00	0.00	0.00
74.00	0.00	0	576.00	0.00	0.00	0.00
76.00	0.00	0	576.00	0.00	0.00	0.00
78.00	0.00	0	576.00	0.00	0.00	0.00
80.00	0.00	0	576.00	0.00	0.00	0.00

Stage-Discharge for Pond 41P: Basin 10

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
576.00	0.00	**0.00**	0.00
576.05	2.22	**2.22**	0.00
576.10	2.22	2.22	0.00
576.15	2.22	2.22	0.00
576.20	3.32	2.22	1.10
576.25	5.32	2.22	3.10
576.30	7.92	2.22	5.70
576.35	10.99	2.22	8.77
576.40	14.48	2.22	12.26
576.45	18.34	2.22	16.12
576.50	22.53	2.22	20.31
576.55	27.04	2.22	24.82
576.60	31.83	2.22	29.61
576.65	36.90	2.22	34.68
576.70	42.23	2.22	40.01
576.75	47.81	2.22	45.59
576.80	53.63	2.22	51.41
576.85	59.67	2.22	57.45
576.90	65.94	2.22	63.72
576.95	72.41	2.22	70.19
577.00	79.10	2.22	76.88
577.05	85.98	2.22	83.76
577.10	93.05	2.22	90.84
577.15	100.32	2.22	98.10
577.20	107.77	2.22	105.55
577.25	115.40	2.22	113.18
577.30	123.20	2.22	120.98
577.35	131.17	2.22	128.96
577.40	139.32	2.22	137.10
577.45	147.62	2.22	145.41
577.50	156.09	2.22	153.88
577.55	161.74	2.22	159.52
577.60	164.56	2.22	162.34
577.65	167.34	2.22	165.12
577.70	170.07	2.22	167.85
577.75	172.75	2.22	170.53
577.80	175.40	2.22	173.18
577.85	178.00	2.22	175.78
577.90	180.57	2.22	178.35
577.95	183.10	2.22	180.88
578.00	185.59	2.22	183.37
578.05	188.05	2.22	185.84
578.10	190.48	2.22	188.26
578.15	192.88	2.22	190.66
578.20	195.25	2.22	193.03
578.25	197.59	2.22	195.37
578.30	199.90	2.22	197.68
578.35	202.19	2.22	199.97
578.40	204.45	2.22	202.23
578.45	206.68	2.22	204.46
578.50	208.89	2.22	206.67
578.55	211.08	2.22	208.86
578.60	213.24	2.22	211.03
578.65	215.39	2.22	213.17
578.70	217.51	2.22	215.29
578.75	219.61	2.22	217.39
578.80	221.69	2.22	219.47
578.85	223.75	2.22	221.53
578.90	225.79	2.22	223.57
578.95	227.81	2.22	225.60
579.00	**229.82**	2.22	**227.60**

Stage-Area-Storage for Pond 41P: Basin 10

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
576.00	**9,583**	0
576.05	9,583	479
576.10	9,583	958
576.15	9,583	1,437
576.20	9,583	1,917
576.25	9,583	2,396
576.30	9,583	2,875
576.35	9,583	3,354
576.40	9,583	3,833
576.45	9,583	4,312
576.50	9,583	4,792
576.55	9,583	5,271
576.60	9,583	5,750
576.65	9,583	6,229
576.70	9,583	6,708
576.75	9,583	7,187
576.80	9,583	7,666
576.85	9,583	8,146
576.90	9,583	8,625
576.95	9,583	9,104
577.00	9,583	9,583
577.05	9,583	10,062
577.10	9,583	10,541
577.15	9,583	11,020
577.20	9,583	11,500
577.25	9,583	11,979
577.30	9,583	12,458
577.35	9,583	12,937
577.40	9,583	13,416
577.45	9,583	13,895
577.50	9,583	14,375
577.55	9,583	14,854
577.60	9,583	15,333
577.65	9,583	15,812
577.70	9,583	16,291
577.75	9,583	16,770
577.80	9,583	17,249
577.85	9,583	17,729
577.90	9,583	18,208
577.95	9,583	18,687
578.00	9,583	19,166
578.05	9,583	19,645
578.10	9,583	20,124
578.15	9,583	20,603
578.20	9,583	21,083
578.25	9,583	21,562
578.30	9,583	22,041
578.35	9,583	22,520
578.40	9,583	22,999
578.45	9,583	23,478
578.50	9,583	23,958
578.55	9,583	24,437
578.60	9,583	24,916
578.65	9,583	25,395
578.70	9,583	25,874
578.75	9,583	26,353
578.80	9,583	26,832
578.85	9,583	27,312
578.90	9,583	27,791
578.95	9,583	28,270
579.00	9,583	**28,749**

Summary for Pond 42P: Basin 9

Inflow Area = 25,049 sf, 64.41% Impervious, Inflow Depth = 0.71" for WQ event
Inflow = 1.08 cfs @ 1.12 hrs, Volume= 1,491 cf
Outflow = 0.61 cfs @ 1.04 hrs, Volume= 1,491 cf, Atten= 44%, Lag= 0.0 min
Discarded = 0.61 cfs @ 1.04 hrs, Volume= 1,491 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 562.11' @ 1.24 hrs Surf.Area= 6,534 sf Storage= 284 cf

Plug-Flow detention time= 3.9 min calculated for 1,490 cf (100% of inflow)
Center-of-Mass det. time= 3.9 min (76.4 - 72.5)

Volume	Invert	Avail.Storage	Storage Description
#1	562.00'	6,325 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 15,812 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
562.00	6,534	0	0
563.00	6,534	6,534	6,534
564.00	6,534	6,534	13,068
564.42	6,534	2,744	15,812

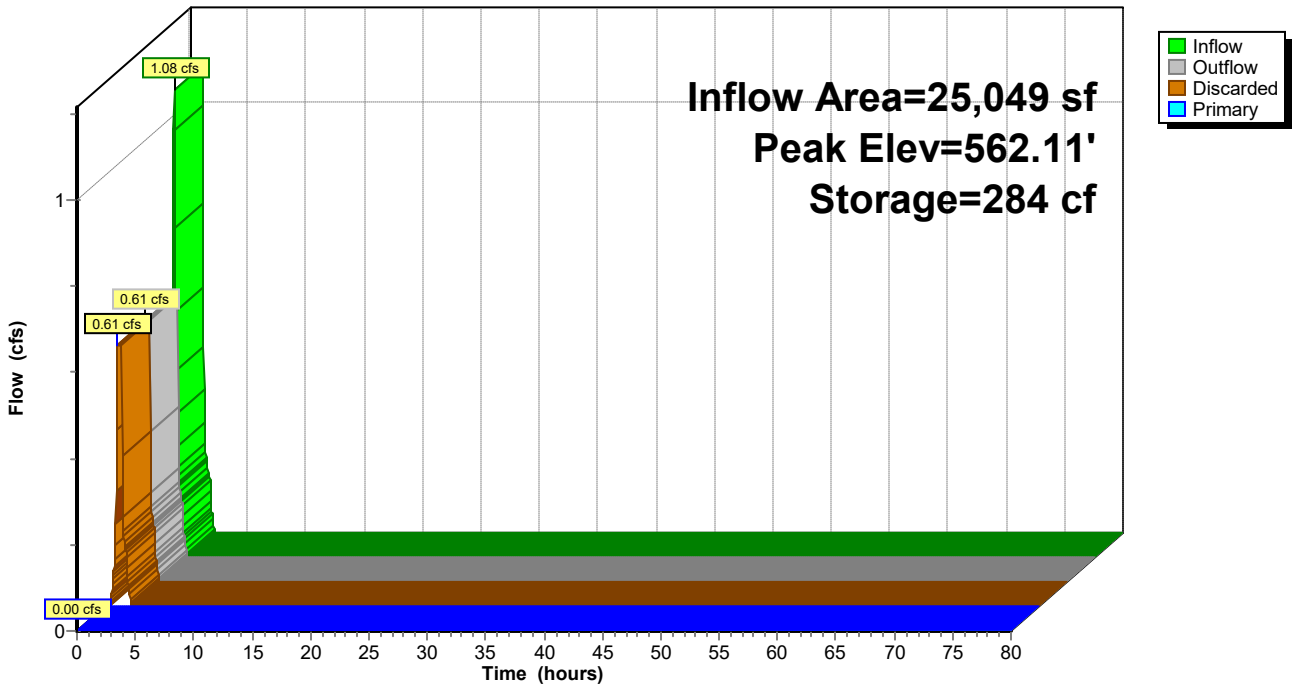
Device	Routing	Invert	Outlet Devices
#1	Primary	564.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	563.00'	**3.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	562.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.61 cfs @ 1.04 hrs HW=562.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.61 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=562.00' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Controls 0.00 cfs)

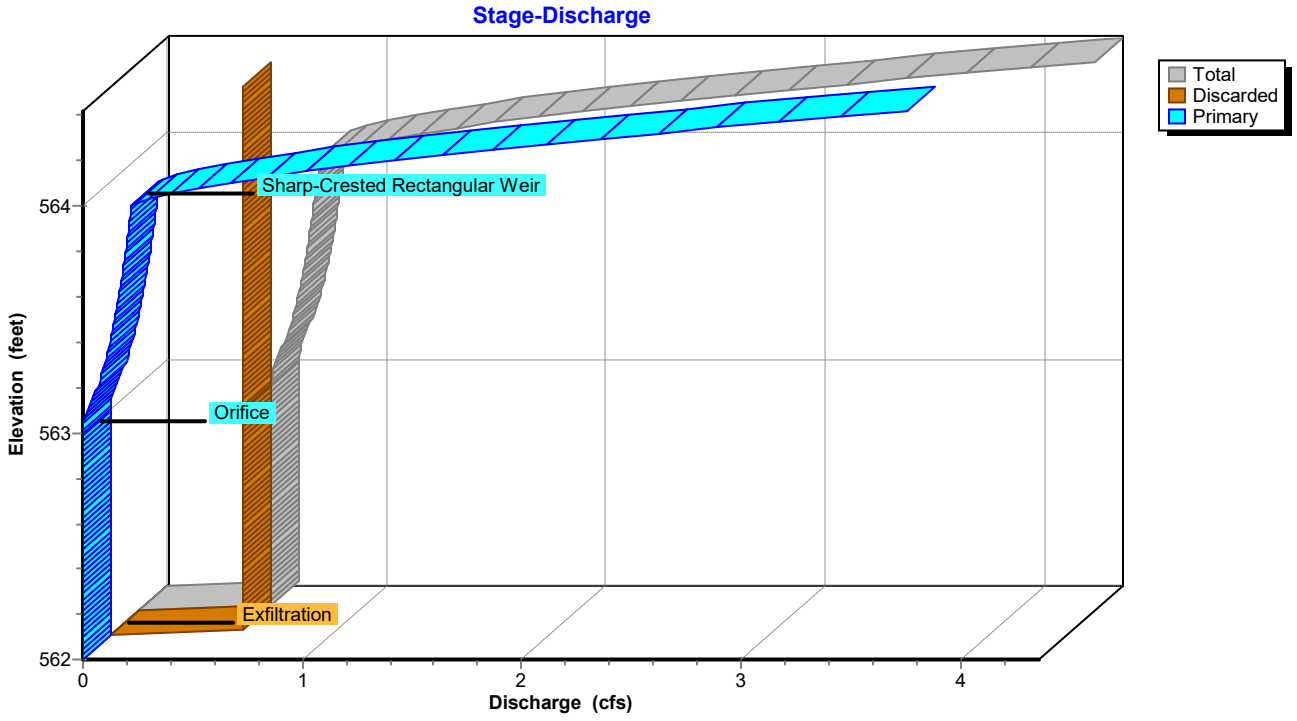
Pond 42P: Basin 9

Hydrograph



Pond 42P: Basin 9

Stage-Discharge



Hydrograph for Pond 42P: Basin 9

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**562.00**	**0.00**	**0.00**	**0.00**
2.00	**0.05**	**5**	**562.00**	**0.05**	**0.05**	0.00
4.00	0.00	0	562.00	0.00	0.00	0.00
6.00	0.00	0	562.00	0.00	0.00	0.00
8.00	0.00	0	562.00	0.00	0.00	0.00
10.00	0.00	0	562.00	0.00	0.00	0.00
12.00	0.00	0	562.00	0.00	0.00	0.00
14.00	0.00	0	562.00	0.00	0.00	0.00
16.00	0.00	0	562.00	0.00	0.00	0.00
18.00	0.00	0	562.00	0.00	0.00	0.00
20.00	0.00	0	562.00	0.00	0.00	0.00
22.00	0.00	0	562.00	0.00	0.00	0.00
24.00	0.00	0	562.00	0.00	0.00	0.00
26.00	0.00	0	562.00	0.00	0.00	0.00
28.00	0.00	0	562.00	0.00	0.00	0.00
30.00	0.00	0	562.00	0.00	0.00	0.00
32.00	0.00	0	562.00	0.00	0.00	0.00
34.00	0.00	0	562.00	0.00	0.00	0.00
36.00	0.00	0	562.00	0.00	0.00	0.00
38.00	0.00	0	562.00	0.00	0.00	0.00
40.00	0.00	0	562.00	0.00	0.00	0.00
42.00	0.00	0	562.00	0.00	0.00	0.00
44.00	0.00	0	562.00	0.00	0.00	0.00
46.00	0.00	0	562.00	0.00	0.00	0.00
48.00	0.00	0	562.00	0.00	0.00	0.00
50.00	0.00	0	562.00	0.00	0.00	0.00
52.00	0.00	0	562.00	0.00	0.00	0.00
54.00	0.00	0	562.00	0.00	0.00	0.00
56.00	0.00	0	562.00	0.00	0.00	0.00
58.00	0.00	0	562.00	0.00	0.00	0.00
60.00	0.00	0	562.00	0.00	0.00	0.00
62.00	0.00	0	562.00	0.00	0.00	0.00
64.00	0.00	0	562.00	0.00	0.00	0.00
66.00	0.00	0	562.00	0.00	0.00	0.00
68.00	0.00	0	562.00	0.00	0.00	0.00
70.00	0.00	0	562.00	0.00	0.00	0.00
72.00	0.00	0	562.00	0.00	0.00	0.00
74.00	0.00	0	562.00	0.00	0.00	0.00
76.00	0.00	0	562.00	0.00	0.00	0.00
78.00	0.00	0	562.00	0.00	0.00	0.00
80.00	0.00	0	562.00	0.00	0.00	0.00

Stage-Discharge for Pond 42P: Basin 9

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
562.00	0.00	**0.00**	0.00
562.05	0.61	**0.61**	0.00
562.10	0.61	0.61	0.00
562.15	0.61	0.61	0.00
562.20	0.61	0.61	0.00
562.25	0.61	0.61	0.00
562.30	0.61	0.61	0.00
562.35	0.61	0.61	0.00
562.40	0.61	0.61	0.00
562.45	0.61	0.61	0.00
562.50	0.61	0.61	0.00
562.55	0.61	0.61	0.00
562.60	0.61	0.61	0.00
562.65	0.61	0.61	0.00
562.70	0.61	0.61	0.00
562.75	0.61	0.61	0.00
562.80	0.61	0.61	0.00
562.85	0.61	0.61	0.00
562.90	0.61	0.61	0.00
562.95	0.61	0.61	0.00
563.00	0.61	0.61	0.00
563.05	0.61	0.61	0.01
563.10	0.62	0.61	0.02
563.15	0.65	0.61	0.04
563.20	0.67	0.61	0.06
563.25	0.69	0.61	0.08
563.30	0.70	0.61	0.10
563.35	0.72	0.61	0.11
563.40	0.73	0.61	0.12
563.45	0.74	0.61	0.13
563.50	0.75	0.61	0.14
563.55	0.76	0.61	0.15
563.60	0.77	0.61	0.16
563.65	0.78	0.61	0.17
563.70	0.78	0.61	0.18
563.75	0.79	0.61	0.19
563.80	0.80	0.61	0.19
563.85	0.81	0.61	0.20
563.90	0.81	0.61	0.21
563.95	0.82	0.61	0.21
564.00	0.83	0.61	0.22
564.05	0.98	0.61	0.37
564.10	1.25	0.61	0.64
564.15	1.60	0.61	0.99
564.20	2.01	0.61	1.40
564.25	2.47	0.61	1.87
564.30	2.98	0.61	2.37
564.35	3.53	0.61	2.92
564.40	**4.11**	0.61	**3.51**

Stage-Area-Storage for Pond 42P: Basin 9

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
562.00	**6,534**	0
562.05	6,534	131
562.10	6,534	261
562.15	6,534	392
562.20	6,534	523
562.25	6,534	653
562.30	6,534	784
562.35	6,534	915
562.40	6,534	1,045
562.45	6,534	1,176
562.50	6,534	1,307
562.55	6,534	1,437
562.60	6,534	1,568
562.65	6,534	1,699
562.70	6,534	1,830
562.75	6,534	1,960
562.80	6,534	2,091
562.85	6,534	2,222
562.90	6,534	2,352
562.95	6,534	2,483
563.00	6,534	2,614
563.05	6,534	2,744
563.10	6,534	2,875
563.15	6,534	3,006
563.20	6,534	3,136
563.25	6,534	3,267
563.30	6,534	3,398
563.35	6,534	3,528
563.40	6,534	3,659
563.45	6,534	3,790
563.50	6,534	3,920
563.55	6,534	4,051
563.60	6,534	4,182
563.65	6,534	4,312
563.70	6,534	4,443
563.75	6,534	4,574
563.80	6,534	4,704
563.85	6,534	4,835
563.90	6,534	4,966
563.95	6,534	5,097
564.00	6,534	5,227
564.05	6,534	5,358
564.10	6,534	5,489
564.15	6,534	5,619
564.20	6,534	5,750
564.25	6,534	5,881
564.30	6,534	6,011
564.35	6,534	6,142
564.40	6,534	**6,273**

Summary for Pond 48P: Basin 8

Inflow Area = 62,190 sf, 63.36% Impervious, Inflow Depth = 0.70" for WQ event
Inflow = 2.52 cfs @ 1.13 hrs, Volume= 3,619 cf
Outflow = 0.93 cfs @ 1.04 hrs, Volume= 3,619 cf, Atten= 63%, Lag= 0.0 min
Discarded = 0.93 cfs @ 1.04 hrs, Volume= 3,619 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 49P : Basin 7

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 573.29' @ 1.32 hrs Surf.Area= 10,019 sf Storage= 1,164 cf

Plug-Flow detention time= 11.0 min calculated for 3,617 cf (100% of inflow)
Center-of-Mass det. time= 11.0 min (84.6 - 73.6)

Volume	Invert	Avail.Storage	Storage Description
#1	573.00'	12,023 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 30,057 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
573.00	10,019	0	0
574.00	10,019	10,019	10,019
575.00	10,019	10,019	20,038
576.00	10,019	10,019	30,057

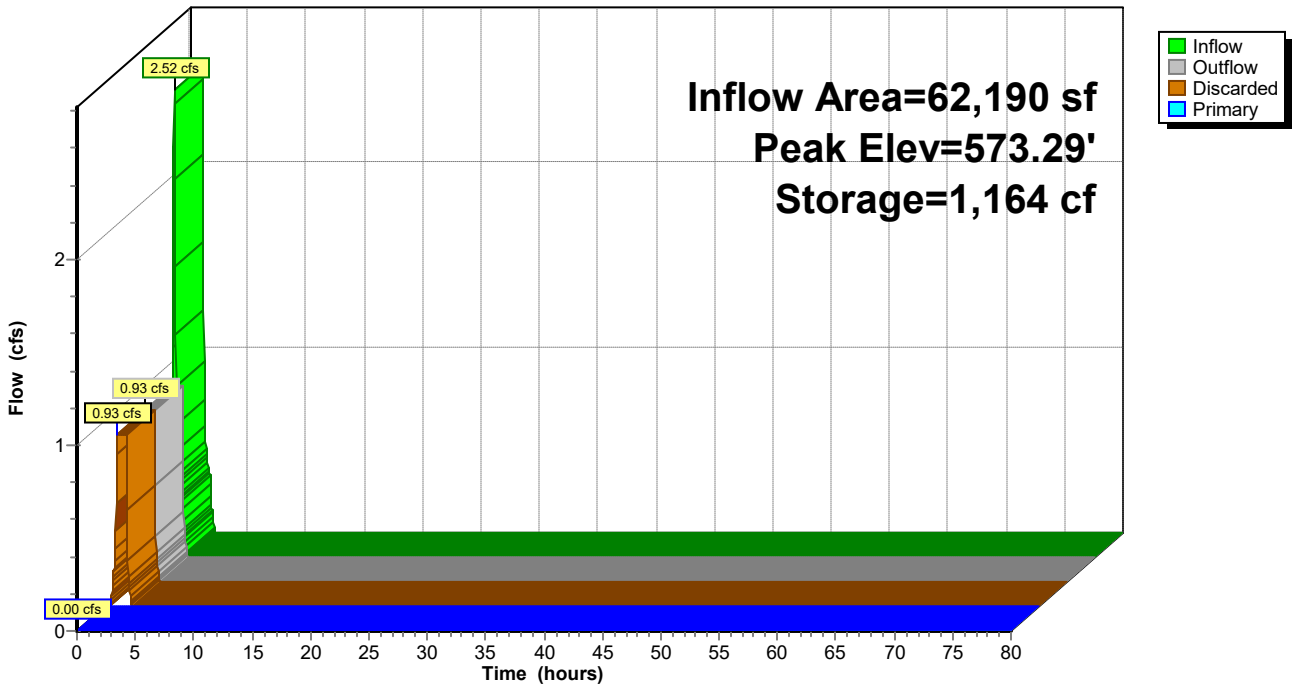
Device	Routing	Invert	Outlet Devices
#1	Primary	575.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Primary	573.45'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Discarded	573.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.93 cfs @ 1.04 hrs HW=573.05' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.93 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=573.00' (Free Discharge)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**2=Orifice** (Controls 0.00 cfs)

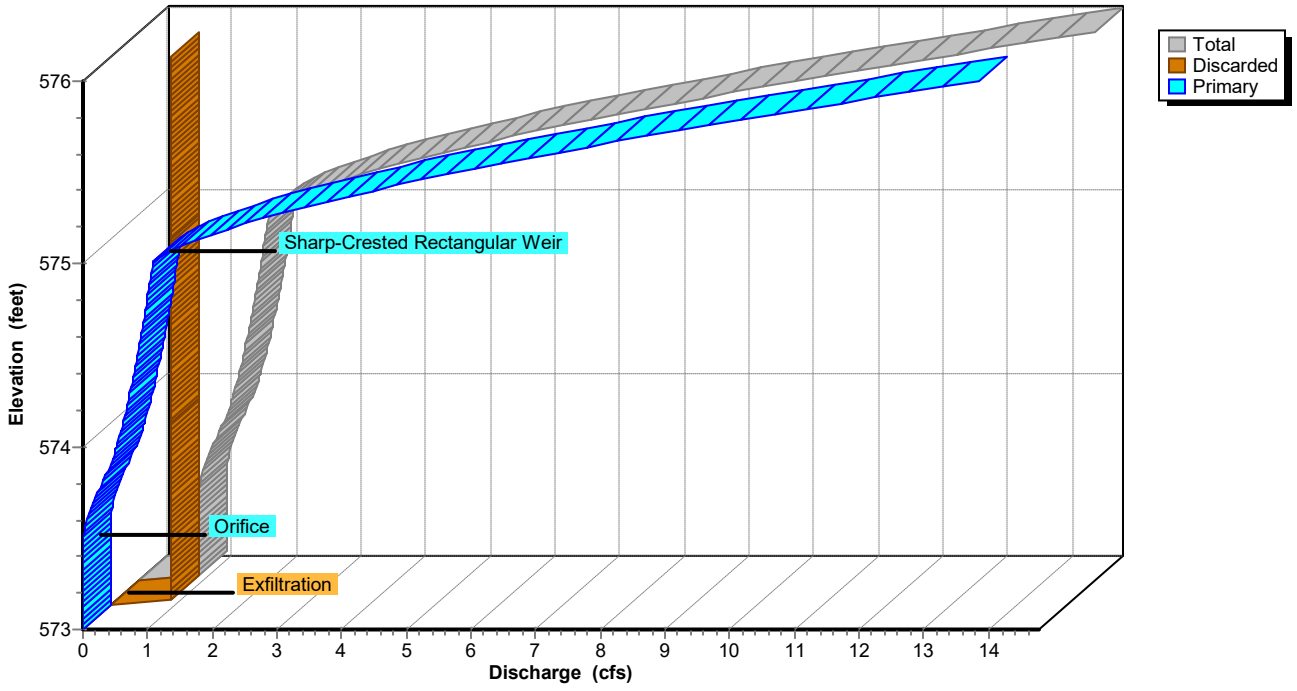
Pond 48P: Basin 8

Hydrograph



Pond 48P: Basin 8

Stage-Discharge



Hydrograph for Pond 48P: Basin 8

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	**0.00**	**0**	**573.00**	**0.00**	**0.00**	**0.00**
2.00	**0.12**	**21**	**573.01**	**0.16**	**0.16**	0.00
4.00	0.00	0	573.00	0.00	0.00	0.00
6.00	0.00	0	573.00	0.00	0.00	0.00
8.00	0.00	0	573.00	0.00	0.00	0.00
10.00	0.00	0	573.00	0.00	0.00	0.00
12.00	0.00	0	573.00	0.00	0.00	0.00
14.00	0.00	0	573.00	0.00	0.00	0.00
16.00	0.00	0	573.00	0.00	0.00	0.00
18.00	0.00	0	573.00	0.00	0.00	0.00
20.00	0.00	0	573.00	0.00	0.00	0.00
22.00	0.00	0	573.00	0.00	0.00	0.00
24.00	0.00	0	573.00	0.00	0.00	0.00
26.00	0.00	0	573.00	0.00	0.00	0.00
28.00	0.00	0	573.00	0.00	0.00	0.00
30.00	0.00	0	573.00	0.00	0.00	0.00
32.00	0.00	0	573.00	0.00	0.00	0.00
34.00	0.00	0	573.00	0.00	0.00	0.00
36.00	0.00	0	573.00	0.00	0.00	0.00
38.00	0.00	0	573.00	0.00	0.00	0.00
40.00	0.00	0	573.00	0.00	0.00	0.00
42.00	0.00	0	573.00	0.00	0.00	0.00
44.00	0.00	0	573.00	0.00	0.00	0.00
46.00	0.00	0	573.00	0.00	0.00	0.00
48.00	0.00	0	573.00	0.00	0.00	0.00
50.00	0.00	0	573.00	0.00	0.00	0.00
52.00	0.00	0	573.00	0.00	0.00	0.00
54.00	0.00	0	573.00	0.00	0.00	0.00
56.00	0.00	0	573.00	0.00	0.00	0.00
58.00	0.00	0	573.00	0.00	0.00	0.00
60.00	0.00	0	573.00	0.00	0.00	0.00
62.00	0.00	0	573.00	0.00	0.00	0.00
64.00	0.00	0	573.00	0.00	0.00	0.00
66.00	0.00	0	573.00	0.00	0.00	0.00
68.00	0.00	0	573.00	0.00	0.00	0.00
70.00	0.00	0	573.00	0.00	0.00	0.00
72.00	0.00	0	573.00	0.00	0.00	0.00
74.00	0.00	0	573.00	0.00	0.00	0.00
76.00	0.00	0	573.00	0.00	0.00	0.00
78.00	0.00	0	573.00	0.00	0.00	0.00
80.00	0.00	0	573.00	0.00	0.00	0.00

Stage-Discharge for Pond 48P: Basin 8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
573.00	0.00	**0.00**	0.00
573.05	0.93	**0.93**	0.00
573.10	0.93	0.93	0.00
573.15	0.93	0.93	0.00
573.20	0.93	0.93	0.00
573.25	0.93	0.93	0.00
573.30	0.93	0.93	0.00
573.35	0.93	0.93	0.00
573.40	0.93	0.93	0.00
573.45	0.93	0.93	0.00
573.50	0.94	0.93	0.01
573.55	0.96	0.93	0.03
573.60	0.99	0.93	0.07
573.65	1.04	0.93	0.11
573.70	1.09	0.93	0.17
573.75	1.16	0.93	0.23
573.80	1.22	0.93	0.30
573.85	1.29	0.93	0.36
573.90	1.35	0.93	0.43
573.95	1.40	0.93	0.47
574.00	1.45	0.93	0.52
574.05	1.49	0.93	0.56
574.10	1.53	0.93	0.60
574.15	1.56	0.93	0.63
574.20	1.60	0.93	0.67
574.25	1.63	0.93	0.70
574.30	1.66	0.93	0.73
574.35	1.69	0.93	0.76
574.40	1.72	0.93	0.79
574.45	1.75	0.93	0.82
574.50	1.77	0.93	0.85
574.55	1.80	0.93	0.87
574.60	1.82	0.93	0.90
574.65	1.85	0.93	0.92
574.70	1.87	0.93	0.95
574.75	1.90	0.93	0.97
574.80	1.92	0.93	0.99
574.85	1.94	0.93	1.01
574.90	1.96	0.93	1.04
574.95	1.98	0.93	1.06
575.00	2.01	0.93	1.08
575.05	2.17	0.93	1.24
575.10	2.46	0.93	1.53
575.15	2.82	0.93	1.89
575.20	3.24	0.93	2.32
575.25	3.72	0.93	2.79
575.30	4.24	0.93	3.31
575.35	4.80	0.93	3.88
575.40	5.40	0.93	4.48
575.45	6.04	0.93	5.11
575.50	6.70	0.93	5.78
575.55	7.40	0.93	6.47
575.60	8.13	0.93	7.20
575.65	8.88	0.93	7.95
575.70	9.66	0.93	8.73
575.75	10.46	0.93	9.53
575.80	11.28	0.93	10.35
575.85	12.13	0.93	11.20
575.90	13.00	0.93	12.07
575.95	13.88	0.93	12.95
576.00	**14.79**	0.93	**13.86**

Stage-Area-Storage for Pond 48P: Basin 8

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
573.00	**10,019**	0
573.05	10,019	200
573.10	10,019	401
573.15	10,019	601
573.20	10,019	802
573.25	10,019	1,002
573.30	10,019	1,202
573.35	10,019	1,403
573.40	10,019	1,603
573.45	10,019	1,803
573.50	10,019	2,004
573.55	10,019	2,204
573.60	10,019	2,405
573.65	10,019	2,605
573.70	10,019	2,805
573.75	10,019	3,006
573.80	10,019	3,206
573.85	10,019	3,406
573.90	10,019	3,607
573.95	10,019	3,807
574.00	10,019	4,008
574.05	10,019	4,208
574.10	10,019	4,408
574.15	10,019	4,609
574.20	10,019	4,809
574.25	10,019	5,010
574.30	10,019	5,210
574.35	10,019	5,410
574.40	10,019	5,611
574.45	10,019	5,811
574.50	10,019	6,011
574.55	10,019	6,212
574.60	10,019	6,412
574.65	10,019	6,613
574.70	10,019	6,813
574.75	10,019	7,013
574.80	10,019	7,214
574.85	10,019	7,414
574.90	10,019	7,614
574.95	10,019	7,815
575.00	10,019	8,015
575.05	10,019	8,216
575.10	10,019	8,416
575.15	10,019	8,616
575.20	10,019	8,817
575.25	10,019	9,017
575.30	10,019	9,217
575.35	10,019	9,418
575.40	10,019	9,618
575.45	10,019	9,819
575.50	10,019	10,019
575.55	10,019	10,219
575.60	10,019	10,420
575.65	10,019	10,620
575.70	10,019	10,821
575.75	10,019	11,021
575.80	10,019	11,221
575.85	10,019	11,422
575.90	10,019	11,622
575.95	10,019	11,822
576.00	10,019	**12,023**

Summary for Pond 49P: Basin 7

Inflow Area = 169,079 sf, 50.99% Impervious, Inflow Depth = 0.33" for WQ event
Inflow = 2.78 cfs @ 1.19 hrs, Volume= 4,622 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 28L : POA 2

Routing by Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs
Peak Elev= 531.32' @ 2.72 hrs Surf.Area= 14,925 sf Storage= 4,621 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

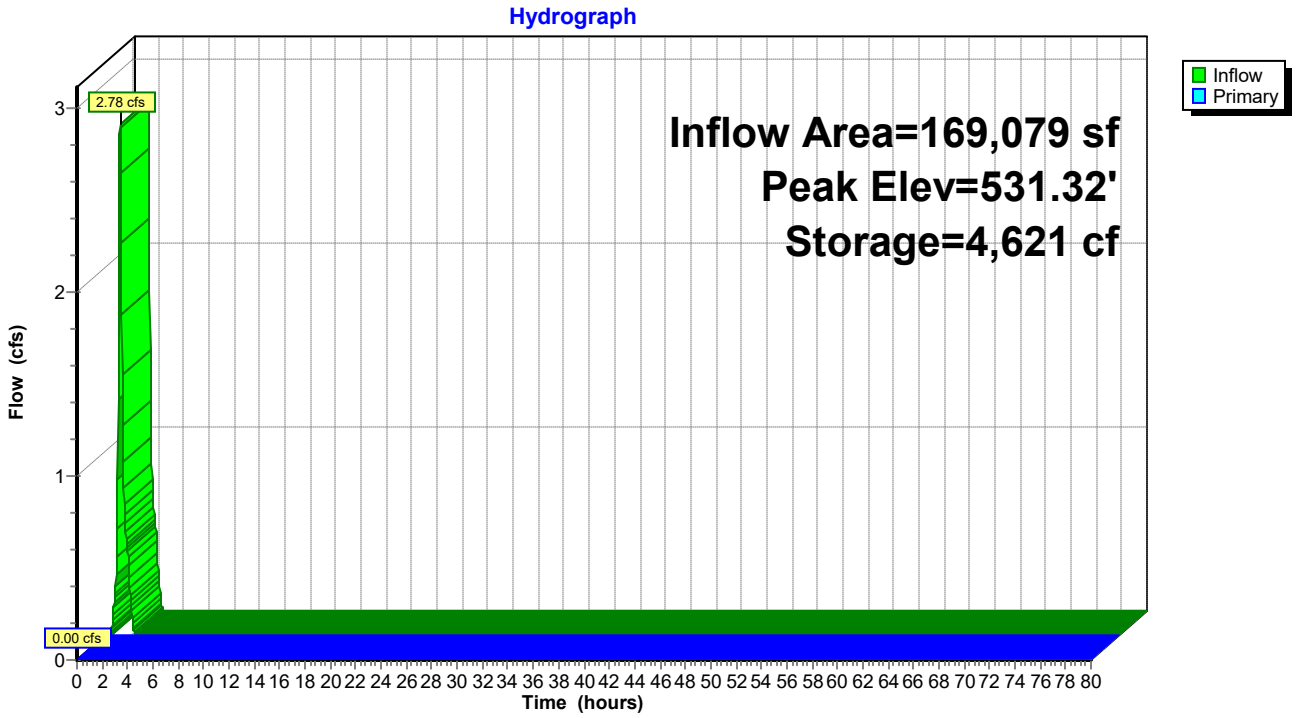
Volume	Invert	Avail.Storage	Storage Description
#1	531.00'	50,966 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
531.00	14,375	0	0
532.00	16,117	15,246	15,246
533.00	17,860	16,989	32,235
534.00	19,602	18,731	50,966

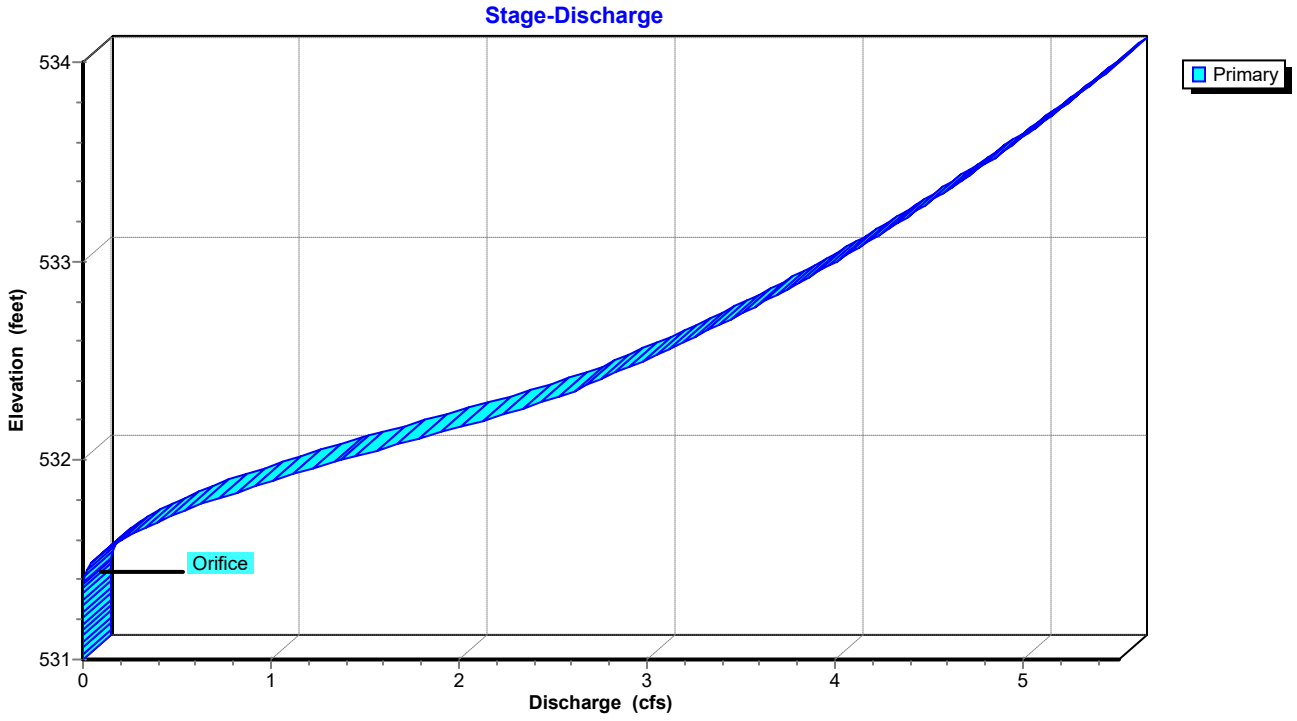
Device	Routing	Invert	Outlet Devices
#1	Primary	531.38'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=531.00' (Free Discharge)
1=Orifice (Controls 0.00 cfs)

Pond 49P: Basin 7



Pond 49P: Basin 7



Hydrograph for Pond 49P: Basin 7

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	**0.00**	0	531.00	**0.00**
2.00	**0.21**	**4,497**	**531.31**	0.00
4.00	0.00	**4,622**	**531.32**	0.00
6.00	0.00	4,622	531.32	0.00
8.00	0.00	4,622	531.32	0.00
10.00	0.00	4,622	531.32	0.00
12.00	0.00	4,622	531.32	0.00
14.00	0.00	4,622	531.32	0.00
16.00	0.00	4,622	531.32	0.00
18.00	0.00	4,622	531.32	0.00
20.00	0.00	4,622	531.32	0.00
22.00	0.00	4,622	531.32	0.00
24.00	0.00	4,622	531.32	0.00
26.00	0.00	4,622	531.32	0.00
28.00	0.00	4,622	531.32	0.00
30.00	0.00	4,622	531.32	0.00
32.00	0.00	4,622	531.32	0.00
34.00	0.00	4,622	531.32	0.00
36.00	0.00	4,622	531.32	0.00
38.00	0.00	4,622	531.32	0.00
40.00	0.00	4,622	531.32	0.00
42.00	0.00	4,622	531.32	0.00
44.00	0.00	4,622	531.32	0.00
46.00	0.00	4,622	531.32	0.00
48.00	0.00	4,622	531.32	0.00
50.00	0.00	4,622	531.32	0.00
52.00	0.00	4,622	531.32	0.00
54.00	0.00	4,622	531.32	0.00
56.00	0.00	4,622	531.32	0.00
58.00	0.00	4,622	531.32	0.00
60.00	0.00	4,622	531.32	0.00
62.00	0.00	4,622	531.32	0.00
64.00	0.00	4,622	531.32	0.00
66.00	0.00	4,622	531.32	0.00
68.00	0.00	4,622	531.32	0.00
70.00	0.00	4,622	531.32	0.00
72.00	0.00	4,622	531.32	0.00
74.00	0.00	4,622	531.32	0.00
76.00	0.00	4,622	531.32	0.00
78.00	0.00	4,622	531.32	0.00
80.00	0.00	4,622	531.32	0.00

Stage-Discharge for Pond 49P: Basin 7

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
531.00	0.00	532.02	1.45	533.04	4.07
531.02	0.00	532.04	1.52	533.06	4.11
531.04	0.00	532.06	1.60	533.08	4.14
531.06	0.00	532.08	1.67	533.10	4.18
531.08	0.00	532.10	1.75	533.12	4.21
531.10	0.00	532.12	1.83	533.14	4.24
531.12	0.00	532.14	1.90	533.16	4.28
531.14	0.00	532.16	1.98	533.18	4.31
531.16	0.00	532.18	2.05	533.20	4.34
531.18	0.00	532.20	2.13	533.22	4.38
531.20	0.00	532.22	2.20	533.24	4.41
531.22	0.00	532.24	2.27	533.26	4.44
531.24	0.00	532.26	2.34	533.28	4.47
531.26	0.00	532.28	2.40	533.30	4.51
531.28	0.00	532.30	2.47	533.32	4.54
531.30	0.00	532.32	2.53	533.34	4.57
531.32	0.00	532.34	2.58	533.36	4.60
531.34	0.00	532.36	2.63	533.38	4.63
531.36	0.00	532.38	2.67	533.40	4.66
531.38	0.00	532.40	2.73	533.42	4.69
531.40	0.00	532.42	2.78	533.44	4.72
531.42	0.01	532.44	2.83	533.46	4.75
531.44	0.02	532.46	2.88	533.48	4.78
531.46	0.03	532.48	2.93	533.50	4.81
531.48	0.04	532.50	2.98	533.52	4.84
531.50	0.06	532.52	3.03	533.54	4.87
531.52	0.09	532.54	3.07	533.56	4.90
531.54	0.11	532.56	3.12	533.58	4.93
531.56	0.14	532.58	3.16	533.60	4.96
531.58	0.17	532.60	3.21	533.62	4.99
531.60	0.20	532.62	3.25	533.64	5.02
531.62	0.24	532.64	3.30	533.66	5.05
531.64	0.28	532.66	3.34	533.68	5.07
531.66	0.32	532.68	3.38	533.70	5.10
531.68	0.37	532.70	3.42	533.72	5.13
531.70	0.42	532.72	3.47	533.74	5.16
531.72	0.47	532.74	3.51	533.76	5.19
531.74	0.52	532.76	3.55	533.78	5.21
531.76	0.57	532.78	3.59	533.80	5.24
531.78	0.63	532.80	3.63	533.82	5.27
531.80	0.69	532.82	3.67	533.84	5.29
531.82	0.75	532.84	3.71	533.86	5.32
531.84	0.81	532.86	3.74	533.88	5.35
531.86	0.88	532.88	3.78	533.90	5.37
531.88	0.95	532.90	3.82	533.92	5.40
531.90	1.01	532.92	3.86	533.94	5.43
531.92	1.08	532.94	3.89	533.96	5.45
531.94	1.15	532.96	3.93	533.98	5.48
531.96	1.22	532.98	3.97	534.00	**5.51**
531.98	1.30	533.00	4.00		
532.00	1.37	533.02	4.04		

Stage-Area-Storage for Pond 49P: Basin 7

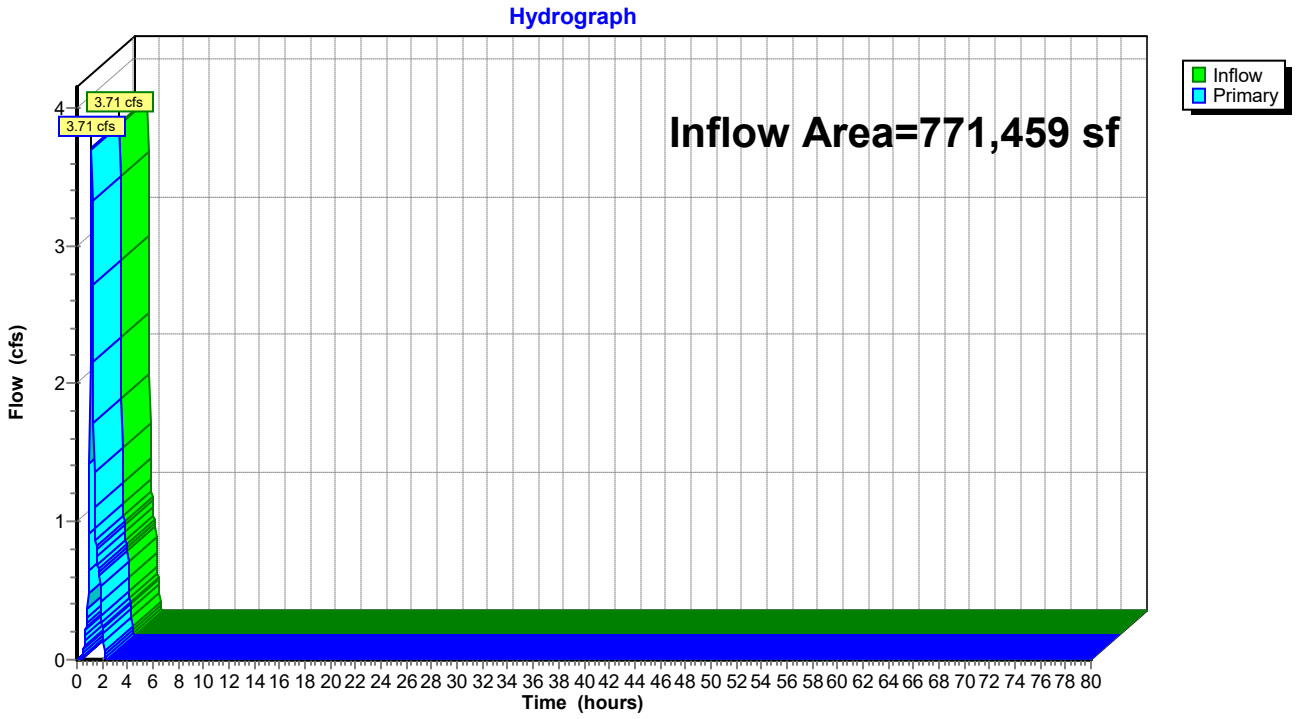
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
531.00	14,375	0
531.05	14,462	721
531.10	14,549	1,446
531.15	14,636	2,176
531.20	14,723	2,910
531.25	14,811	3,648
531.30	14,898	4,391
531.35	14,985	5,138
531.40	15,072	5,889
531.45	15,159	6,645
531.50	15,246	7,405
531.55	15,333	8,170
531.60	15,420	8,939
531.65	15,507	9,712
531.70	15,594	10,489
531.75	15,682	11,271
531.80	15,769	12,057
531.85	15,856	12,848
531.90	15,943	13,643
531.95	16,030	14,442
532.00	16,117	15,246
532.05	16,204	16,054
532.10	16,291	16,866
532.15	16,378	17,683
532.20	16,466	18,504
532.25	16,553	19,330
532.30	16,640	20,160
532.35	16,727	20,994
532.40	16,814	21,832
532.45	16,901	22,675
532.50	16,989	23,522
532.55	17,076	24,374
532.60	17,163	25,230
532.65	17,250	26,090
532.70	17,337	26,955
532.75	17,424	27,824
532.80	17,511	28,697
532.85	17,599	29,575
532.90	17,686	30,457
532.95	17,773	31,344
533.00	17,860	32,235
533.05	17,947	33,130
533.10	18,034	34,029
533.15	18,121	34,933
533.20	18,208	35,841
533.25	18,296	36,754
533.30	18,383	37,671
533.35	18,470	38,592
533.40	18,557	39,518
533.45	18,644	40,448
533.50	18,731	41,382
533.55	18,818	42,321
533.60	18,905	43,264
533.65	18,992	44,211
533.70	19,079	45,163
533.75	19,167	46,119
533.80	19,254	47,080
533.85	19,341	48,045
533.90	19,428	49,014
533.95	19,515	49,988
534.00	**19,602**	**50,966**

Summary for Link 28L: POA 2

Inflow Area = 771,459 sf, 50.89% Impervious, Inflow Depth = 0.09" for WQ event
Inflow = 3.71 cfs @ 1.15 hrs, Volume= 5,748 cf
Primary = 3.71 cfs @ 1.15 hrs, Volume= 5,748 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 28L: POA 2



Hydrograph for Link 28L: POA 2

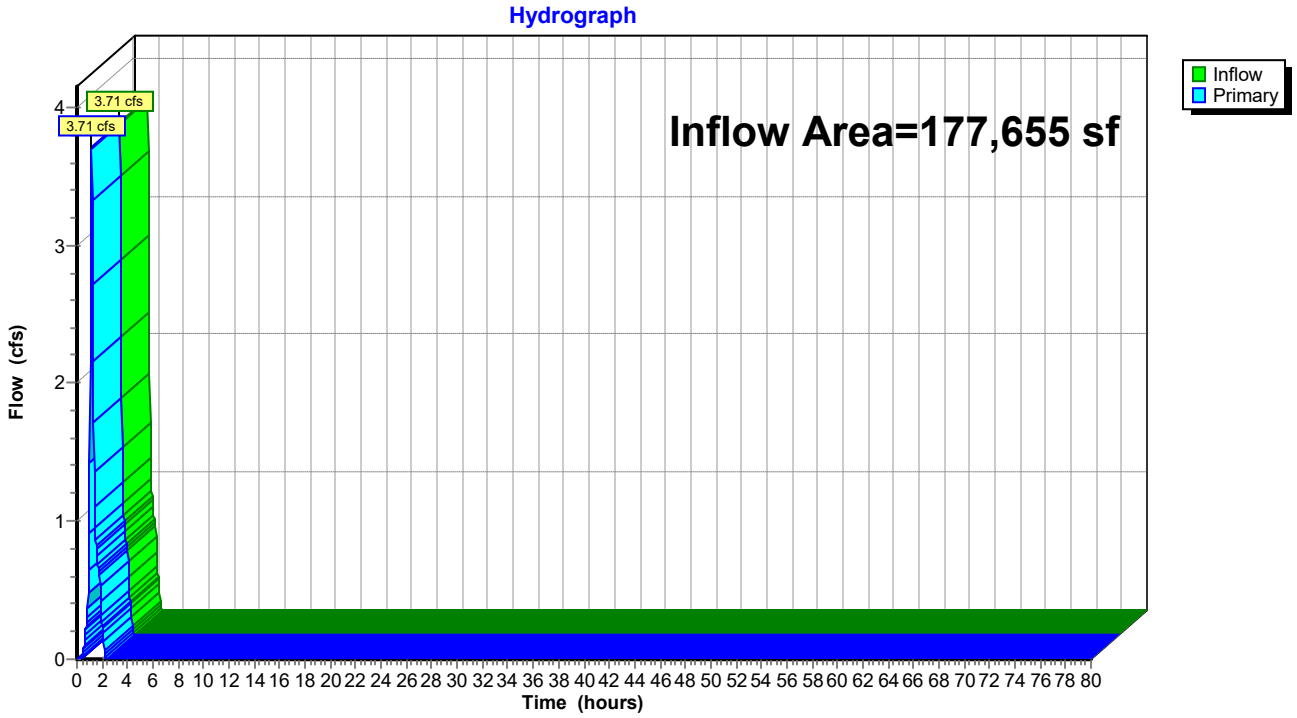
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.00	0.00	0.00
0.80	**0.30**	0.00	**0.30**	41.60	0.00	0.00	0.00
1.60	**0.74**	0.00	**0.74**	42.40	0.00	0.00	0.00
2.40	0.00	0.00	0.00	43.20	0.00	0.00	0.00
3.20	0.00	0.00	0.00	44.00	0.00	0.00	0.00
4.00	0.00	0.00	0.00	44.80	0.00	0.00	0.00
4.80	0.00	0.00	0.00	45.60	0.00	0.00	0.00
5.60	0.00	0.00	0.00	46.40	0.00	0.00	0.00
6.40	0.00	0.00	0.00	47.20	0.00	0.00	0.00
7.20	0.00	0.00	0.00	48.00	0.00	0.00	0.00
8.00	0.00	0.00	0.00	48.80	0.00	0.00	0.00
8.80	0.00	0.00	0.00	49.60	0.00	0.00	0.00
9.60	0.00	0.00	0.00	50.40	0.00	0.00	0.00
10.40	0.00	0.00	0.00	51.20	0.00	0.00	0.00
11.20	0.00	0.00	0.00	52.00	0.00	0.00	0.00
12.00	0.00	0.00	0.00	52.80	0.00	0.00	0.00
12.80	0.00	0.00	0.00	53.60	0.00	0.00	0.00
13.60	0.00	0.00	0.00	54.40	0.00	0.00	0.00
14.40	0.00	0.00	0.00	55.20	0.00	0.00	0.00
15.20	0.00	0.00	0.00	56.00	0.00	0.00	0.00
16.00	0.00	0.00	0.00	56.80	0.00	0.00	0.00
16.80	0.00	0.00	0.00	57.60	0.00	0.00	0.00
17.60	0.00	0.00	0.00	58.40	0.00	0.00	0.00
18.40	0.00	0.00	0.00	59.20	0.00	0.00	0.00
19.20	0.00	0.00	0.00	60.00	0.00	0.00	0.00
20.00	0.00	0.00	0.00	60.80	0.00	0.00	0.00
20.80	0.00	0.00	0.00	61.60	0.00	0.00	0.00
21.60	0.00	0.00	0.00	62.40	0.00	0.00	0.00
22.40	0.00	0.00	0.00	63.20	0.00	0.00	0.00
23.20	0.00	0.00	0.00	64.00	0.00	0.00	0.00
24.00	0.00	0.00	0.00	64.80	0.00	0.00	0.00
24.80	0.00	0.00	0.00	65.60	0.00	0.00	0.00
25.60	0.00	0.00	0.00	66.40	0.00	0.00	0.00
26.40	0.00	0.00	0.00	67.20	0.00	0.00	0.00
27.20	0.00	0.00	0.00	68.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	68.80	0.00	0.00	0.00
28.80	0.00	0.00	0.00	69.60	0.00	0.00	0.00
29.60	0.00	0.00	0.00	70.40	0.00	0.00	0.00
30.40	0.00	0.00	0.00	71.20	0.00	0.00	0.00
31.20	0.00	0.00	0.00	72.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	72.80	0.00	0.00	0.00
32.80	0.00	0.00	0.00	73.60	0.00	0.00	0.00
33.60	0.00	0.00	0.00	74.40	0.00	0.00	0.00
34.40	0.00	0.00	0.00	75.20	0.00	0.00	0.00
35.20	0.00	0.00	0.00	76.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	76.80	0.00	0.00	0.00
36.80	0.00	0.00	0.00	77.60	0.00	0.00	0.00
37.60	0.00	0.00	0.00	78.40	0.00	0.00	0.00
38.40	0.00	0.00	0.00	79.20	0.00	0.00	0.00
39.20	0.00	0.00	0.00	80.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00				

Summary for Link 34L: DA 2 Undetained

Inflow Area = 177,655 sf, 29.56% Impervious, Inflow Depth = 0.39" for WQ event
Inflow = 3.71 cfs @ 1.15 hrs, Volume= 5,748 cf
Primary = 3.71 cfs @ 1.15 hrs, Volume= 5,748 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 28L : POA 2

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.04 hrs

Link 34L: DA 2 Undetained



Hydrograph for Link 34L: DA 2 Undetained

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	**0.00**	0.00	40.80	0.00	0.00	0.00
0.80	**0.30**	0.00	**0.30**	41.60	0.00	0.00	0.00
1.60	**0.74**	0.00	**0.74**	42.40	0.00	0.00	0.00
2.40	0.00	0.00	0.00	43.20	0.00	0.00	0.00
3.20	0.00	0.00	0.00	44.00	0.00	0.00	0.00
4.00	0.00	0.00	0.00	44.80	0.00	0.00	0.00
4.80	0.00	0.00	0.00	45.60	0.00	0.00	0.00
5.60	0.00	0.00	0.00	46.40	0.00	0.00	0.00
6.40	0.00	0.00	0.00	47.20	0.00	0.00	0.00
7.20	0.00	0.00	0.00	48.00	0.00	0.00	0.00
8.00	0.00	0.00	0.00	48.80	0.00	0.00	0.00
8.80	0.00	0.00	0.00	49.60	0.00	0.00	0.00
9.60	0.00	0.00	0.00	50.40	0.00	0.00	0.00
10.40	0.00	0.00	0.00	51.20	0.00	0.00	0.00
11.20	0.00	0.00	0.00	52.00	0.00	0.00	0.00
12.00	0.00	0.00	0.00	52.80	0.00	0.00	0.00
12.80	0.00	0.00	0.00	53.60	0.00	0.00	0.00
13.60	0.00	0.00	0.00	54.40	0.00	0.00	0.00
14.40	0.00	0.00	0.00	55.20	0.00	0.00	0.00
15.20	0.00	0.00	0.00	56.00	0.00	0.00	0.00
16.00	0.00	0.00	0.00	56.80	0.00	0.00	0.00
16.80	0.00	0.00	0.00	57.60	0.00	0.00	0.00
17.60	0.00	0.00	0.00	58.40	0.00	0.00	0.00
18.40	0.00	0.00	0.00	59.20	0.00	0.00	0.00
19.20	0.00	0.00	0.00	60.00	0.00	0.00	0.00
20.00	0.00	0.00	0.00	60.80	0.00	0.00	0.00
20.80	0.00	0.00	0.00	61.60	0.00	0.00	0.00
21.60	0.00	0.00	0.00	62.40	0.00	0.00	0.00
22.40	0.00	0.00	0.00	63.20	0.00	0.00	0.00
23.20	0.00	0.00	0.00	64.00	0.00	0.00	0.00
24.00	0.00	0.00	0.00	64.80	0.00	0.00	0.00
24.80	0.00	0.00	0.00	65.60	0.00	0.00	0.00
25.60	0.00	0.00	0.00	66.40	0.00	0.00	0.00
26.40	0.00	0.00	0.00	67.20	0.00	0.00	0.00
27.20	0.00	0.00	0.00	68.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	68.80	0.00	0.00	0.00
28.80	0.00	0.00	0.00	69.60	0.00	0.00	0.00
29.60	0.00	0.00	0.00	70.40	0.00	0.00	0.00
30.40	0.00	0.00	0.00	71.20	0.00	0.00	0.00
31.20	0.00	0.00	0.00	72.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	72.80	0.00	0.00	0.00
32.80	0.00	0.00	0.00	73.60	0.00	0.00	0.00
33.60	0.00	0.00	0.00	74.40	0.00	0.00	0.00
34.40	0.00	0.00	0.00	75.20	0.00	0.00	0.00
35.20	0.00	0.00	0.00	76.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	76.80	0.00	0.00	0.00
36.80	0.00	0.00	0.00	77.60	0.00	0.00	0.00
37.60	0.00	0.00	0.00	78.40	0.00	0.00	0.00
38.40	0.00	0.00	0.00	79.20	0.00	0.00	0.00
39.20	0.00	0.00	0.00	80.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00				

Events for Subcatchment 19S: Basin 3 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	2.22	8,665	3.21
10-Year	5.22	3.40	13,465	4.98
100-Year	**8.66**	**5.65**	**22,753**	**8.42**
WQ	1.25	2.03	2,796	1.03

Events for Subcatchment 20S: Basin 3 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	0.55	1,922	1.20
10-Year	5.22	1.20	4,074	2.54
100-Year	**8.66**	**2.57**	**8,851**	**5.52**
WQ	1.25	0.06	118	0.07

Events for Subcatchment 21S: Basin 4 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	3.77	13,377	3.21
10-Year	5.22	5.76	20,787	4.98
100-Year	**8.66**	**9.59**	**35,125**	**8.42**
WQ	1.25	3.34	4,316	1.03

Events for Subcatchment 24S: Basin 4 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	0.24	752	1.20
10-Year	5.22	0.52	1,594	2.54
100-Year	**8.66**	**1.11**	**3,462**	**5.52**
WQ	1.25	0.03	46	0.07

Events for Subcatchment 25S: Basin 2 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	2.54	9,497	1.45
10-Year	5.22	5.11	18,966	2.90
100-Year	**8.66**	**10.39**	**39,275**	**6.00**
WQ	1.25	0.50	878	0.13

Events for Subcatchment 28S: Basin 2 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	1.91	8,063	3.21
10-Year	5.22	2.92	12,529	4.98
100-Year	**8.66**	**4.86**	**21,171**	**8.42**
WQ	1.25	1.76	2,601	1.03

Events for Subcatchment 29S: Basin 8 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	2.68	10,529	3.21
10-Year	5.22	4.08	16,362	4.98
100-Year	**8.66**	**6.80**	**27,647**	**8.42**
WQ	1.25	2.44	3,397	1.03

Events for Subcatchment 30S: Basin 8 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	0.76	2,632	1.39
10-Year	5.22	1.55	5,332	2.81
100-Year	**8.66**	**3.19**	**11,171**	**5.88**
WQ	1.25	0.13	222	0.12

Events for Subcatchment 31S: Basin 7 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	2.80	12,509	3.21
10-Year	5.22	4.28	19,438	4.98
100-Year	**8.66**	**7.12**	**32,846**	**8.42**
WQ	1.25	2.58	4,036	1.03

Events for Subcatchment 32S: Basin 7 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	1.74	6,939	1.39
10-Year	5.22	3.58	14,058	2.81
100-Year	**8.66**	**7.37**	**29,453**	**5.88**
WQ	1.25	0.30	586	0.12

Events for Subcatchment 35S: DA 2 Und - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	3.49	14,033	3.21
10-Year	5.22	5.34	21,805	4.98
100-Year	**8.66**	**8.88**	**36,846**	**8.42**
WQ	1.25	3.19	4,527	1.03

Events for Subcatchment 36S: DA 2 Und - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	4.07	14,455	1.39
10-Year	5.22	8.34	29,284	2.81
100-Year	**8.66**	**17.13**	**61,351**	**5.88**
WQ	1.25	0.72	1,220	0.12

Events for Subcatchment 45S: Basin 11 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	4.24	17,431	3.21
10-Year	5.22	6.48	27,085	4.98
100-Year	**8.66**	**10.78**	**45,768**	**8.42**
WQ	1.25	3.89	5,624	1.03

Events for Subcatchment 46S: Basin 11 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	0.56	2,043	1.26
10-Year	5.22	1.18	4,264	2.63
100-Year	**8.66**	**2.51**	**9,150**	**5.64**
WQ	1.25	0.07	141	0.09

Events for Subcatchment 51S: Basin 10 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	3.77	15,986	3.21
10-Year	5.22	5.76	24,841	4.98
100-Year	**8.66**	**9.59**	**41,975**	**8.42**
WQ	1.25	3.47	5,158	1.03

Events for Subcatchment 52S: Basin 10 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	1.03	3,908	1.26
10-Year	5.22	2.19	8,157	2.63
100-Year	**8.66**	**4.65**	**17,503**	**5.64**
WQ	1.25	0.14	270	0.09

Events for Subcatchment 53S: Basin 9 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	1.13	4,311	3.21
10-Year	5.22	1.73	6,699	4.98
100-Year	**8.66**	**2.88**	**11,320**	**8.42**
WQ	1.25	1.04	1,391	1.03

Events for Subcatchment 54S: Basin 9 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
2-Year	3.44	0.33	1,079	1.45
10-Year	5.22	0.65	2,154	2.90
100-Year	**8.66**	**1.31**	**4,461**	**6.00**
WQ	1.25	0.07	100	0.13

2024-05-12 HydroCad - Proposed POA 2
Prepared by Anderson Consulting Services
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Events for Pond 21P: Basin 3

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	2.77	1.87	**1.21**	0.66	559.36	748
10-Year	4.59	3.95	1.21	2.74	559.58	1,206
100-Year	**8.22**	**7.57**	1.21	**6.36**	**559.85**	**1,781**
WQ	2.05	1.21	1.21	0.00	559.21	449

Events for Pond 22P: Basin 4

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	4.01	1.13	**1.13**	0.00	572.43	2,074
10-Year	6.28	1.47	1.13	0.35	572.89	4,328
100-Year	**10.70**	**2.14**	1.13	**1.01**	**573.90**	**9,247**
WQ	3.35	1.13	1.13	0.00	572.31	1,514

Events for Pond 27P: Basin 2

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	4.89	0.00	544.67	17,936
10-Year	10.85	1.51	544.77	20,640
100-Year	**22.41**	**14.43**	**545.06**	**28,838**
WQ	2.15	0.00	544.13	3,479

Events for Pond 33P: Basin 11

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	4.79	3.31	**3.13**	0.18	590.15	811
10-Year	7.66	5.55	3.13	2.42	590.38	2,065
100-Year	**13.28**	**10.88**	3.13	**7.75**	**590.72**	**3,879**
WQ	3.93	3.13	3.13	0.00	590.07	384

Events for Pond 41P: Basin 10

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	4.80	2.87	**2.22**	0.65	576.18	1,769
10-Year	7.95	6.87	2.22	4.66	576.28	2,690
100-Year	**14.24**	**13.47**	2.22	**11.25**	**576.39**	**3,699**
WQ	3.54	2.22	2.22	0.00	576.09	900

Events for Pond 42P: Basin 9

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	1.46	0.61	**0.61**	0.00	562.21	557
10-Year	2.38	0.61	0.61	0.00	562.57	1,499
100-Year	**4.19**	**0.74**	0.61	**0.14**	**563.47**	**3,837**
WQ	1.08	0.61	0.61	0.00	562.11	284

Events for Pond 48P: Basin 8

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	3.43	0.95	**0.93**	0.03	573.54	2,179
10-Year	5.63	1.54	0.93	0.61	574.11	4,465
100-Year	**9.98**	**3.83**	0.93	**2.90**	**575.26**	**9,061**
WQ	2.52	0.93	0.93	0.00	573.29	1,164

Events for Pond 49P: Basin 7

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	4.54	0.56	531.76	11,362
10-Year	8.21	2.01	532.17	17,984
100-Year	**15.55**	**4.01**	**533.01**	**32,345**
WQ	2.78	0.00	531.32	4,621

Events for Link 28L: POA 2

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
2-Year	7.60	7.60	**0.00**
10-Year	19.45	19.45	0.00
100-Year	**56.02**	**56.02**	0.00
WQ	3.71	3.71	0.00

Events for Link 34L: DA 2 Undetained

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
2-Year	7.56	7.56	**0.00**
10-Year	13.67	13.67	0.00
100-Year	**26.01**	**26.01**	0.00
WQ	3.71	3.71	0.00

Summary for Subcatchment 26S: Basin 12 pre-dev

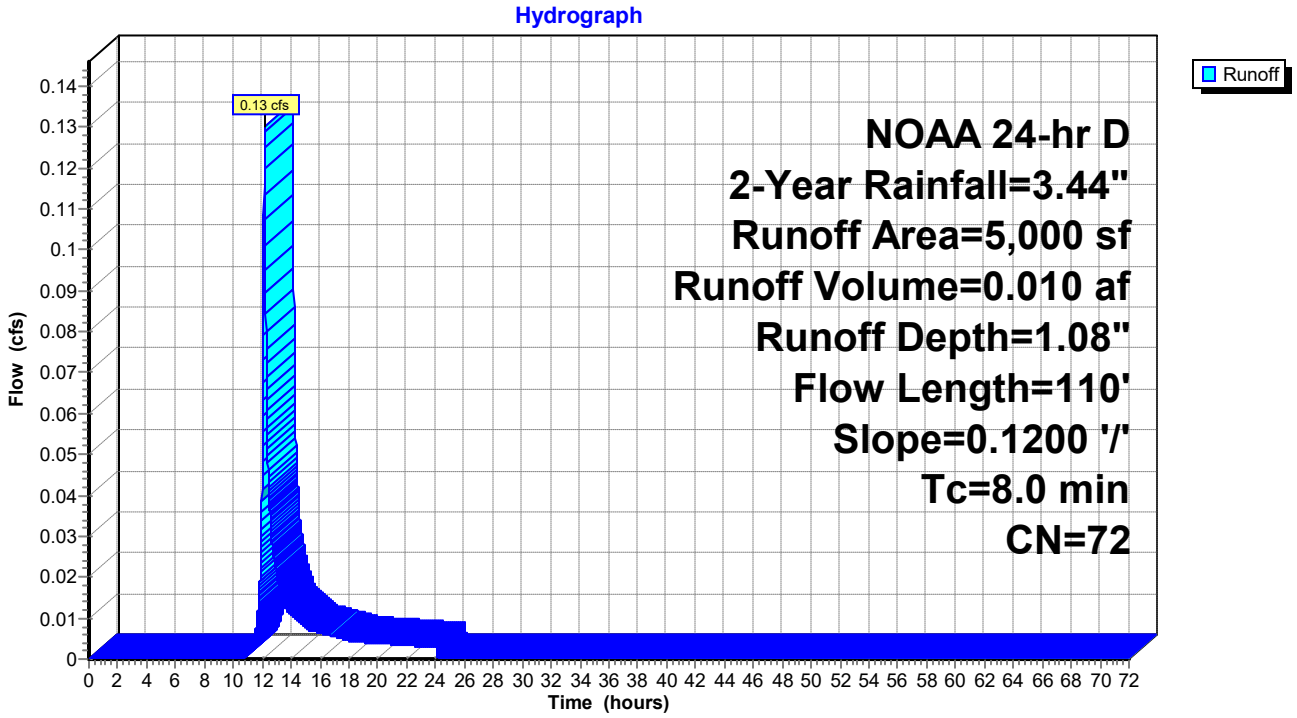
Runoff = 0.13 cfs @ 12.16 hrs, Volume= 0.010 af, Depth= 1.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
5,000	72	Woods/grass comb., Good, HSG C
5,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	70	0.1200	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.47"
0.4	40	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.0	110	Total			

Subcatchment 26S: Basin 12 pre-dev



Hydrograph for Subcatchment 26S: Basin 12 pre-dev

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.13	0.00	0.00
4.00	0.18	0.00	0.00
5.00	0.24	0.00	0.00
6.00	0.29	0.00	0.00
7.00	0.36	0.00	0.00
8.00	0.45	0.00	0.00
9.00	0.55	0.00	0.00
10.00	0.68	0.00	0.00
11.00	0.89	0.00	0.00
12.00	1.65	0.16	**0.05**
13.00	2.55	0.55	**0.02**
14.00	2.76	0.67	0.01
15.00	2.89	0.75	0.01
16.00	2.99	0.80	0.01
17.00	3.08	0.85	0.01
18.00	3.15	0.90	0.00
19.00	3.20	0.93	0.00
20.00	3.26	0.97	0.00
21.00	3.31	1.00	0.00
22.00	3.36	1.03	0.00
23.00	3.40	1.06	0.00
24.00	**3.44**	**1.08**	0.00
25.00	3.44	1.08	0.00
26.00	3.44	1.08	0.00
27.00	3.44	1.08	0.00
28.00	3.44	1.08	0.00
29.00	3.44	1.08	0.00
30.00	3.44	1.08	0.00
31.00	3.44	1.08	0.00
32.00	3.44	1.08	0.00
33.00	3.44	1.08	0.00
34.00	3.44	1.08	0.00
35.00	3.44	1.08	0.00
36.00	3.44	1.08	0.00
37.00	3.44	1.08	0.00
38.00	3.44	1.08	0.00
39.00	3.44	1.08	0.00
40.00	3.44	1.08	0.00
41.00	3.44	1.08	0.00
42.00	3.44	1.08	0.00
43.00	3.44	1.08	0.00
44.00	3.44	1.08	0.00
45.00	3.44	1.08	0.00
46.00	3.44	1.08	0.00
47.00	3.44	1.08	0.00
48.00	3.44	1.08	0.00
49.00	3.44	1.08	0.00
50.00	3.44	1.08	0.00
51.00	3.44	1.08	0.00
52.00	3.44	1.08	0.00
53.00	3.44	1.08	0.00
54.00	3.44	1.08	0.00
55.00	3.44	1.08	0.00
56.00	3.44	1.08	0.00
57.00	3.44	1.08	0.00
58.00	3.44	1.08	0.00
59.00	3.44	1.08	0.00
60.00	3.44	1.08	0.00
61.00	3.44	1.08	0.00
62.00	3.44	1.08	0.00
63.00	3.44	1.08	0.00
64.00	3.44	1.08	0.00
65.00	3.44	1.08	0.00
66.00	3.44	1.08	0.00
67.00	3.44	1.08	0.00
68.00	3.44	1.08	0.00
69.00	3.44	1.08	0.00
70.00	3.44	1.08	0.00
71.00	3.44	1.08	0.00
72.00	3.44	1.08	0.00

Summary for Subcatchment 27S: Basin 12 - Imp

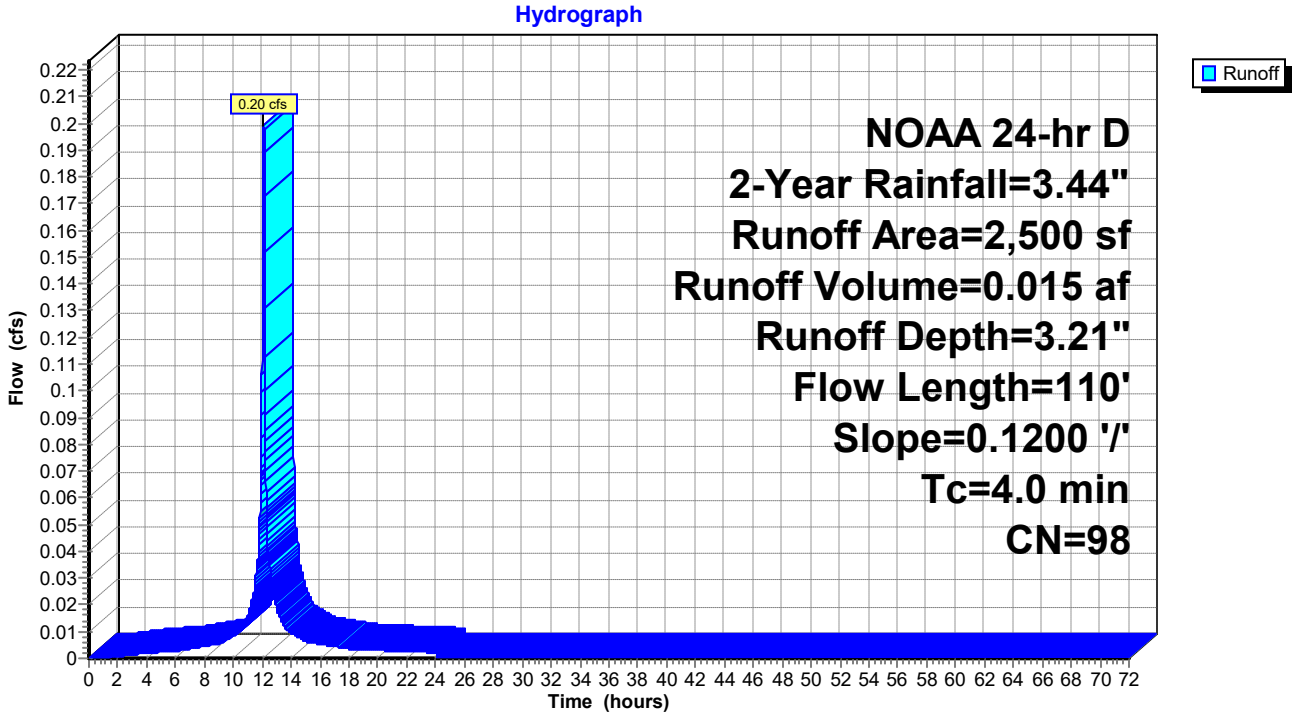
Runoff = 0.20 cfs @ 12.11 hrs, Volume= 0.015 af, Depth= 3.21"
Routed to Pond 30 : Basin 12

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
2,500	98	Paved parking, HSG C
2,500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.1200	0.22		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	60	0.1200	5.20		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.0	110	Total			

Subcatchment 27S: Basin 12 - Imp



Hydrograph for Subcatchment 27S: Basin 12 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.01	0.00
3.00	0.13	0.03	0.00
4.00	0.18	0.06	0.00
5.00	0.24	0.09	0.00
6.00	0.29	0.14	0.00
7.00	0.36	0.20	0.00
8.00	0.45	0.27	0.00
9.00	0.55	0.36	0.01
10.00	0.68	0.49	0.01
11.00	0.89	0.69	0.02
12.00	1.65	1.43	**0.12**
13.00	2.55	2.32	**0.02**
14.00	2.76	2.53	0.01
15.00	2.89	2.66	0.01
16.00	2.99	2.76	0.01
17.00	3.08	2.85	0.00
18.00	3.15	2.91	0.00
19.00	3.20	2.97	0.00
20.00	3.26	3.03	0.00
21.00	3.31	3.08	0.00
22.00	3.36	3.12	0.00
23.00	3.40	3.17	0.00
24.00	**3.44**	**3.21**	0.00
25.00	3.44	3.21	0.00
26.00	3.44	3.21	0.00
27.00	3.44	3.21	0.00
28.00	3.44	3.21	0.00
29.00	3.44	3.21	0.00
30.00	3.44	3.21	0.00
31.00	3.44	3.21	0.00
32.00	3.44	3.21	0.00
33.00	3.44	3.21	0.00
34.00	3.44	3.21	0.00
35.00	3.44	3.21	0.00
36.00	3.44	3.21	0.00
37.00	3.44	3.21	0.00
38.00	3.44	3.21	0.00
39.00	3.44	3.21	0.00
40.00	3.44	3.21	0.00
41.00	3.44	3.21	0.00
42.00	3.44	3.21	0.00
43.00	3.44	3.21	0.00
44.00	3.44	3.21	0.00
45.00	3.44	3.21	0.00
46.00	3.44	3.21	0.00
47.00	3.44	3.21	0.00
48.00	3.44	3.21	0.00
49.00	3.44	3.21	0.00
50.00	3.44	3.21	0.00
51.00	3.44	3.21	0.00
52.00	3.44	3.21	0.00
53.00	3.44	3.21	0.00
54.00	3.44	3.21	0.00
55.00	3.44	3.21	0.00
56.00	3.44	3.21	0.00
57.00	3.44	3.21	0.00
58.00	3.44	3.21	0.00
59.00	3.44	3.21	0.00
60.00	3.44	3.21	0.00
61.00	3.44	3.21	0.00
62.00	3.44	3.21	0.00
63.00	3.44	3.21	0.00
64.00	3.44	3.21	0.00
65.00	3.44	3.21	0.00
66.00	3.44	3.21	0.00
67.00	3.44	3.21	0.00
68.00	3.44	3.21	0.00
69.00	3.44	3.21	0.00
70.00	3.44	3.21	0.00
71.00	3.44	3.21	0.00
72.00	3.44	3.21	0.00

Summary for Subcatchment 29S: Basin 12 - Perv

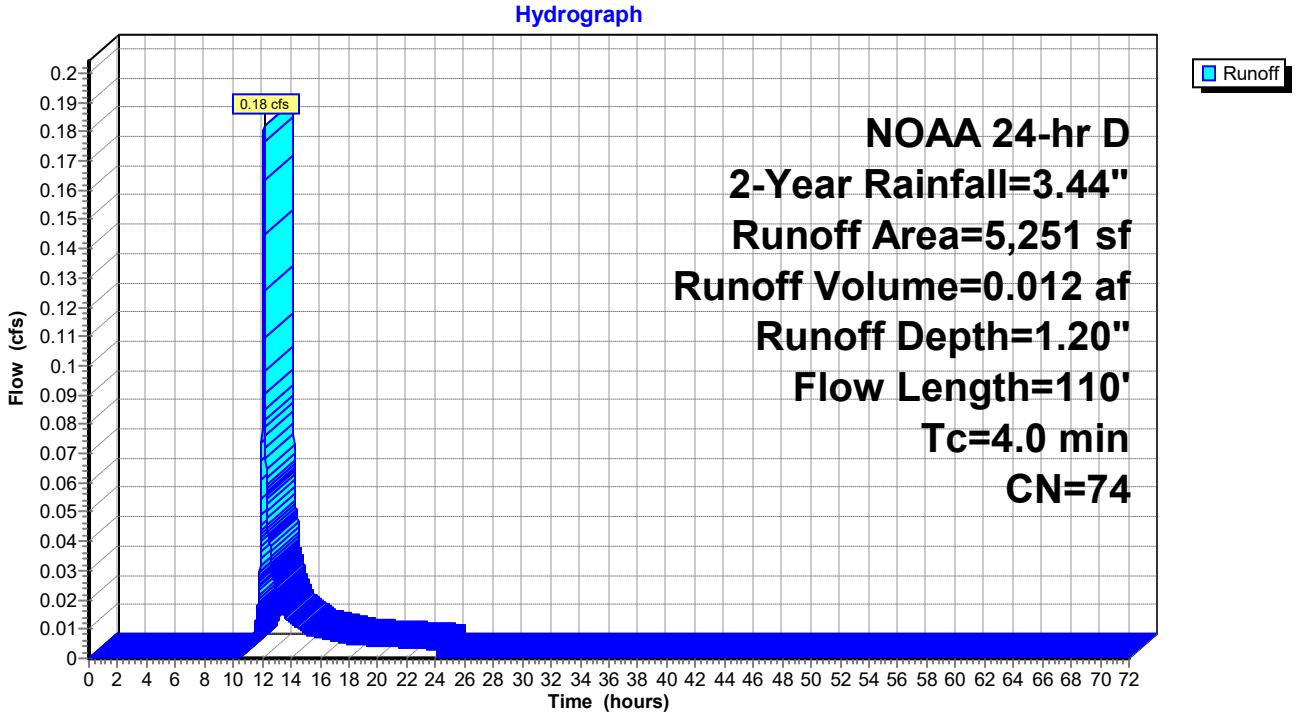
Runoff = 0.18 cfs @ 12.12 hrs, Volume= 0.012 af, Depth= 1.20"
Routed to Pond 30 : Basin 12

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.44"

Area (sf)	CN	Description
5,251	74	>75% Grass cover, Good, HSG C
5,251		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.1200	0.22		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	60	0.1200	5.20		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.0	110	Total			

Subcatchment 29S: Basin 12 - Perv



Hydrograph for Subcatchment 29S: Basin 12 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.08	0.00	0.00
3.00	0.13	0.00	0.00
4.00	0.18	0.00	0.00
5.00	0.24	0.00	0.00
6.00	0.29	0.00	0.00
7.00	0.36	0.00	0.00
8.00	0.45	0.00	0.00
9.00	0.55	0.00	0.00
10.00	0.68	0.00	0.00
11.00	0.89	0.01	0.00
12.00	1.65	0.20	**0.09**
13.00	2.55	0.63	**0.02**
14.00	2.76	0.76	0.01
15.00	2.89	0.84	0.01
16.00	2.99	0.90	0.01
17.00	3.08	0.96	0.01
18.00	3.15	1.00	0.00
19.00	3.20	1.04	0.00
20.00	3.26	1.08	0.00
21.00	3.31	1.11	0.00
22.00	3.36	1.14	0.00
23.00	3.40	1.17	0.00
24.00	**3.44**	**1.20**	0.00
25.00	3.44	1.20	0.00
26.00	3.44	1.20	0.00
27.00	3.44	1.20	0.00
28.00	3.44	1.20	0.00
29.00	3.44	1.20	0.00
30.00	3.44	1.20	0.00
31.00	3.44	1.20	0.00
32.00	3.44	1.20	0.00
33.00	3.44	1.20	0.00
34.00	3.44	1.20	0.00
35.00	3.44	1.20	0.00
36.00	3.44	1.20	0.00
37.00	3.44	1.20	0.00
38.00	3.44	1.20	0.00
39.00	3.44	1.20	0.00
40.00	3.44	1.20	0.00
41.00	3.44	1.20	0.00
42.00	3.44	1.20	0.00
43.00	3.44	1.20	0.00
44.00	3.44	1.20	0.00
45.00	3.44	1.20	0.00
46.00	3.44	1.20	0.00
47.00	3.44	1.20	0.00
48.00	3.44	1.20	0.00
49.00	3.44	1.20	0.00
50.00	3.44	1.20	0.00
51.00	3.44	1.20	0.00
52.00	3.44	1.20	0.00
53.00	3.44	1.20	0.00
54.00	3.44	1.20	0.00
55.00	3.44	1.20	0.00
56.00	3.44	1.20	0.00
57.00	3.44	1.20	0.00
58.00	3.44	1.20	0.00
59.00	3.44	1.20	0.00
60.00	3.44	1.20	0.00
61.00	3.44	1.20	0.00
62.00	3.44	1.20	0.00
63.00	3.44	1.20	0.00
64.00	3.44	1.20	0.00
65.00	3.44	1.20	0.00
66.00	3.44	1.20	0.00
67.00	3.44	1.20	0.00
68.00	3.44	1.20	0.00
69.00	3.44	1.20	0.00
70.00	3.44	1.20	0.00
71.00	3.44	1.20	0.00
72.00	3.44	1.20	0.00

Summary for Pond 30: Basin 12

Inflow Area = 0.178 ac, 32.25% Impervious, Inflow Depth = 1.85" for 2-Year event
Inflow = 0.38 cfs @ 12.12 hrs, Volume= 0.027 af
Outflow = 0.08 cfs @ 11.88 hrs, Volume= 0.027 af, Atten= 78%, Lag= 0.0 min
Discarded = 0.08 cfs @ 11.88 hrs, Volume= 0.027 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 594.60' @ 12.39 hrs Surf.Area= 900 sf Storage= 215 cf

Plug-Flow detention time= 14.7 min calculated for 0.027 af (100% of inflow)
Center-of-Mass det. time= 14.7 min (819.5 - 804.8)

Volume	Invert	Avail.Storage	Storage Description
#1	594.00'	1,724 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 4,500 cf Overall - 191 cf Embedded = 4,309 cf x 40.0% Voids
#2	596.00'	151 cf	**8.00'D x 3.00'H Vertical Cone/Cylinder** Inside #1 191 cf Overall - 6.0" Wall Thickness = 151 cf
		1,874 cf	Total Available Storage

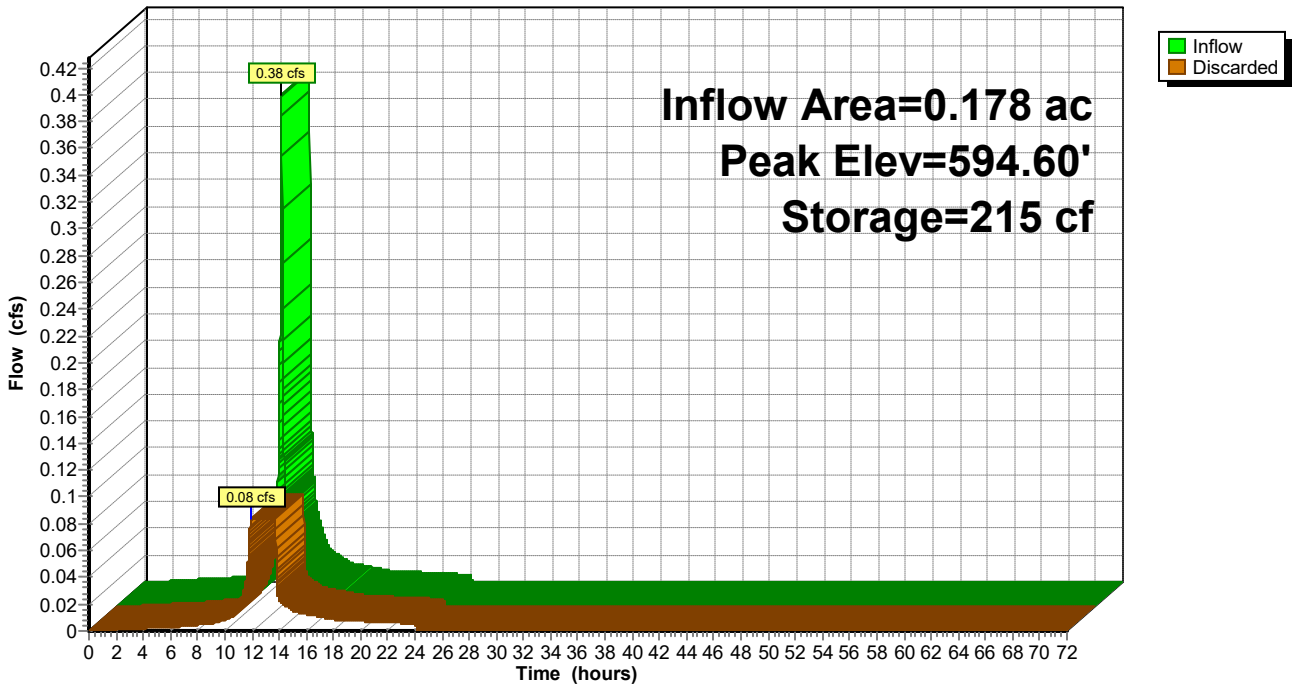
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.00	900	0	0
599.00	900	4,500	4,500

Device	Routing	Invert	Outlet Devices
#1	Discarded	594.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.08 cfs @ 11.88 hrs HW=594.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

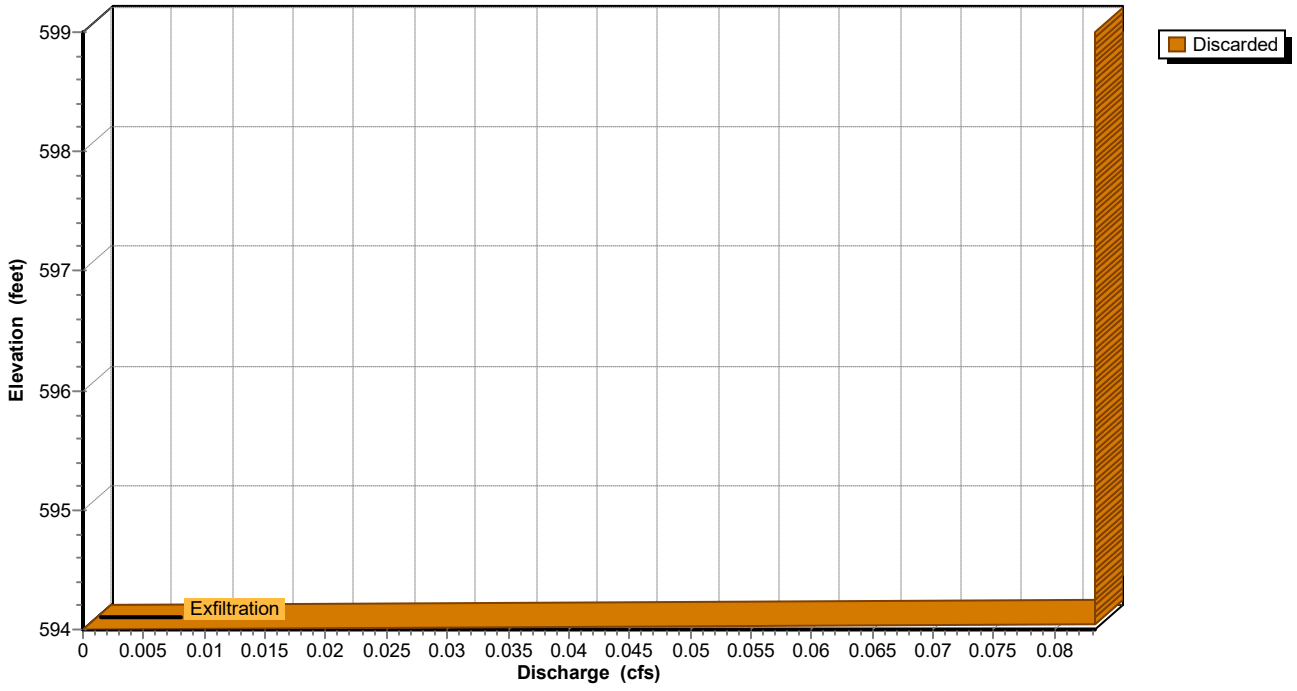
Pond 30: Basin 12

Hydrograph



Pond 30: Basin 12

Stage-Discharge



Hydrograph for Pond 30: Basin 12

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	594.00	0.00
2.00	0.00	0	594.00	0.00
4.00	0.00	0	594.00	0.00
6.00	0.00	1	594.00	0.00
8.00	0.00	1	594.00	0.00
10.00	0.01	2	594.01	**0.01**
12.00	**0.20**	**46**	**594.13**	**0.08**
14.00	**0.02**	**5**	**594.01**	0.02
16.00	0.01	3	594.01	0.01
18.00	0.01	2	594.01	0.01
20.00	0.01	2	594.00	0.01
22.00	0.01	1	594.00	0.01
24.00	0.01	1	594.00	0.01
26.00	0.00	0	594.00	0.00
28.00	0.00	0	594.00	0.00
30.00	0.00	0	594.00	0.00
32.00	0.00	0	594.00	0.00
34.00	0.00	0	594.00	0.00
36.00	0.00	0	594.00	0.00
38.00	0.00	0	594.00	0.00
40.00	0.00	0	594.00	0.00
42.00	0.00	0	594.00	0.00
44.00	0.00	0	594.00	0.00
46.00	0.00	0	594.00	0.00
48.00	0.00	0	594.00	0.00
50.00	0.00	0	594.00	0.00
52.00	0.00	0	594.00	0.00
54.00	0.00	0	594.00	0.00
56.00	0.00	0	594.00	0.00
58.00	0.00	0	594.00	0.00
60.00	0.00	0	594.00	0.00
62.00	0.00	0	594.00	0.00
64.00	0.00	0	594.00	0.00
66.00	0.00	0	594.00	0.00
68.00	0.00	0	594.00	0.00
70.00	0.00	0	594.00	0.00
72.00	0.00	0	594.00	0.00

Stage-Discharge for Pond 30: Basin 12

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
594.00	**0.00**	596.55	0.08
594.05	**0.08**	596.60	0.08
594.10	0.08	596.65	0.08
594.15	0.08	596.70	0.08
594.20	0.08	596.75	0.08
594.25	0.08	596.80	0.08
594.30	0.08	596.85	0.08
594.35	0.08	596.90	0.08
594.40	0.08	596.95	0.08
594.45	0.08	597.00	0.08
594.50	0.08	597.05	0.08
594.55	0.08	597.10	0.08
594.60	0.08	597.15	0.08
594.65	0.08	597.20	0.08
594.70	0.08	597.25	0.08
594.75	0.08	597.30	0.08
594.80	0.08	597.35	0.08
594.85	0.08	597.40	0.08
594.90	0.08	597.45	0.08
594.95	0.08	597.50	0.08
595.00	0.08	597.55	0.08
595.05	0.08	597.60	0.08
595.10	0.08	597.65	0.08
595.15	0.08	597.70	0.08
595.20	0.08	597.75	0.08
595.25	0.08	597.80	0.08
595.30	0.08	597.85	0.08
595.35	0.08	597.90	0.08
595.40	0.08	597.95	0.08
595.45	0.08	598.00	0.08
595.50	0.08	598.05	0.08
595.55	0.08	598.10	0.08
595.60	0.08	598.15	0.08
595.65	0.08	598.20	0.08
595.70	0.08	598.25	0.08
595.75	0.08	598.30	0.08
595.80	0.08	598.35	0.08
595.85	0.08	598.40	0.08
595.90	0.08	598.45	0.08
595.95	0.08	598.50	0.08
596.00	0.08	598.55	0.08
596.05	0.08	598.60	0.08
596.10	0.08	598.65	0.08
596.15	0.08	598.70	0.08
596.20	0.08	598.75	0.08
596.25	0.08	598.80	0.08
596.30	0.08	598.85	0.08
596.35	0.08	598.90	0.08
596.40	0.08	598.95	0.08
596.45	0.08	599.00	0.08
596.50	0.08		

Stage-Area-Storage for Pond 30: Basin 12

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
594.00	**900**	0
594.05	900	18
594.10	900	36
594.15	900	54
594.20	900	72
594.25	900	90
594.30	900	108
594.35	900	126
594.40	900	144
594.45	900	162
594.50	900	180
594.55	900	198
594.60	900	216
594.65	900	234
594.70	900	252
594.75	900	270
594.80	900	288
594.85	900	306
594.90	900	324
594.95	900	342
595.00	900	360
595.05	900	378
595.10	900	396
595.15	900	414
595.20	900	432
595.25	900	450
595.30	900	468
595.35	900	486
595.40	900	504
595.45	900	522
595.50	900	540
595.55	900	558
595.60	900	576
595.65	900	594
595.70	900	612
595.75	900	630
595.80	900	648
595.85	900	666
595.90	900	684
595.95	900	702
596.00	900	720
596.05	900	739
596.10	900	758
596.15	900	778
596.20	900	797
596.25	900	816
596.30	900	835
596.35	900	855
596.40	900	874
596.45	900	893
596.50	900	912
596.55	900	932
596.60	900	951
596.65	900	970
596.70	900	989
596.75	900	1,009
596.80	900	1,028
596.85	900	1,047
596.90	900	1,066
596.95	900	1,086
597.00	900	1,105
597.05	900	1,124
597.10	900	1,143
597.15	900	1,163
597.20	900	1,182
597.25	900	1,201
597.30	900	1,220
597.35	900	1,240
597.40	900	1,259
597.45	900	1,278
597.50	900	1,297
597.55	900	1,316
597.60	900	1,336
597.65	900	1,355
597.70	900	1,374
597.75	900	1,393
597.80	900	1,413
597.85	900	1,432
597.90	900	1,451
597.95	900	1,470
598.00	900	1,490
598.05	900	1,509
598.10	900	1,528
598.15	900	1,547
598.20	900	1,567
598.25	900	1,586
598.30	900	1,605
598.35	900	1,624
598.40	900	1,644
598.45	900	1,663
598.50	900	1,682
598.55	900	1,701
598.60	900	1,721
598.65	900	1,740
598.70	900	1,759
598.75	900	1,778
598.80	900	1,797
598.85	900	1,817
598.90	900	1,836
598.95	900	1,855
599.00	900	**1,874**

Summary for Subcatchment 26S: Basin 12 pre-dev

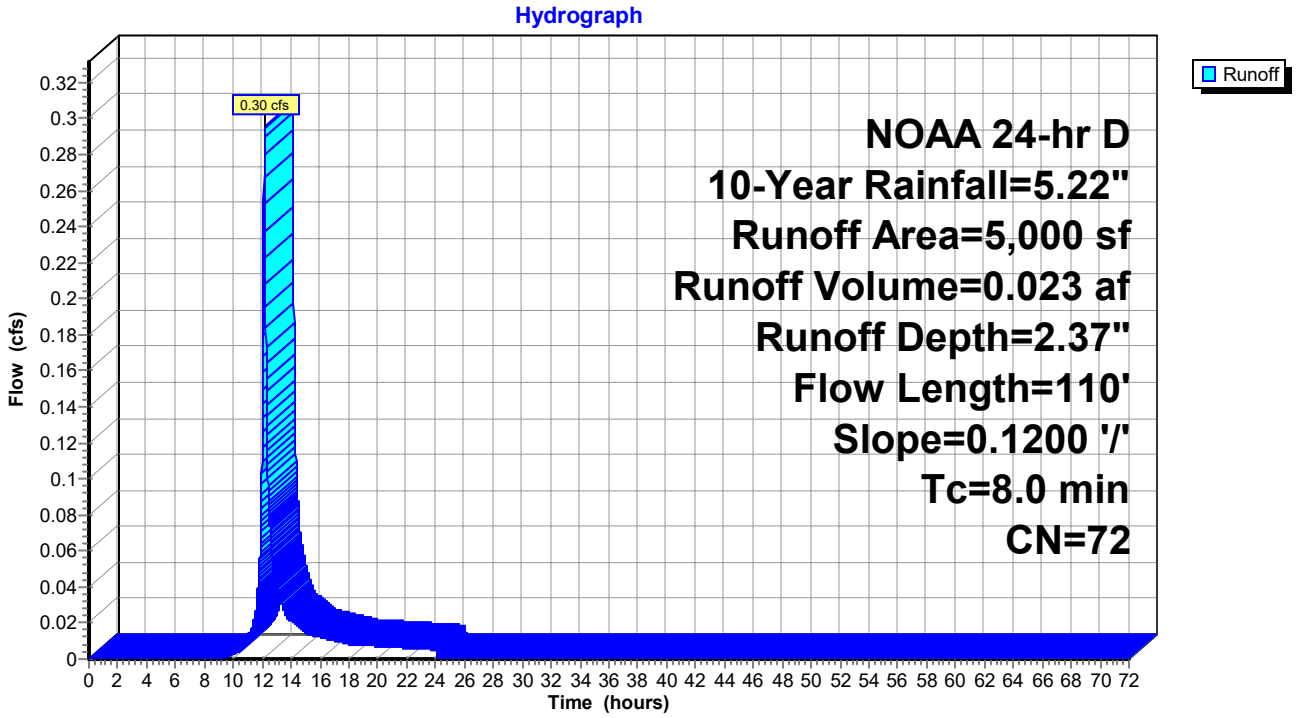
Runoff = 0.30 cfs @ 12.15 hrs, Volume= 0.023 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
5,000	72	Woods/grass comb., Good, HSG C
5,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	70	0.1200	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.47"
0.4	40	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.0	110	Total			

Subcatchment 26S: Basin 12 pre-dev



Hydrograph for Subcatchment 26S: Basin 12 pre-dev

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.55	0.00	0.00
8.00	0.68	0.00	0.00
9.00	0.83	0.00	0.00
10.00	1.03	0.02	0.00
11.00	1.36	0.08	0.01
12.00	2.50	0.53	**0.13**
13.00	3.86	1.36	**0.04**
14.00	4.19	1.59	0.02
15.00	4.39	1.74	0.01
16.00	4.54	1.85	0.01
17.00	4.67	1.95	0.01
18.00	4.77	2.03	0.01
19.00	4.86	2.09	0.01
20.00	4.95	2.16	0.01
21.00	5.02	2.22	0.01
22.00	5.09	2.27	0.01
23.00	5.16	2.32	0.01
24.00	**5.22**	**2.37**	0.01
25.00	5.22	2.37	0.00
26.00	5.22	2.37	0.00
27.00	5.22	2.37	0.00
28.00	5.22	2.37	0.00
29.00	5.22	2.37	0.00
30.00	5.22	2.37	0.00
31.00	5.22	2.37	0.00
32.00	5.22	2.37	0.00
33.00	5.22	2.37	0.00
34.00	5.22	2.37	0.00
35.00	5.22	2.37	0.00
36.00	5.22	2.37	0.00
37.00	5.22	2.37	0.00
38.00	5.22	2.37	0.00
39.00	5.22	2.37	0.00
40.00	5.22	2.37	0.00
41.00	5.22	2.37	0.00
42.00	5.22	2.37	0.00
43.00	5.22	2.37	0.00
44.00	5.22	2.37	0.00
45.00	5.22	2.37	0.00
46.00	5.22	2.37	0.00
47.00	5.22	2.37	0.00
48.00	5.22	2.37	0.00
49.00	5.22	2.37	0.00
50.00	5.22	2.37	0.00
51.00	5.22	2.37	0.00
52.00	5.22	2.37	0.00
53.00	5.22	2.37	0.00
54.00	5.22	2.37	0.00
55.00	5.22	2.37	0.00
56.00	5.22	2.37	0.00
57.00	5.22	2.37	0.00
58.00	5.22	2.37	0.00
59.00	5.22	2.37	0.00
60.00	5.22	2.37	0.00
61.00	5.22	2.37	0.00
62.00	5.22	2.37	0.00
63.00	5.22	2.37	0.00
64.00	5.22	2.37	0.00
65.00	5.22	2.37	0.00
66.00	5.22	2.37	0.00
67.00	5.22	2.37	0.00
68.00	5.22	2.37	0.00
69.00	5.22	2.37	0.00
70.00	5.22	2.37	0.00
71.00	5.22	2.37	0.00
72.00	5.22	2.37	0.00

Summary for Subcatchment 27S: Basin 12 - Imp

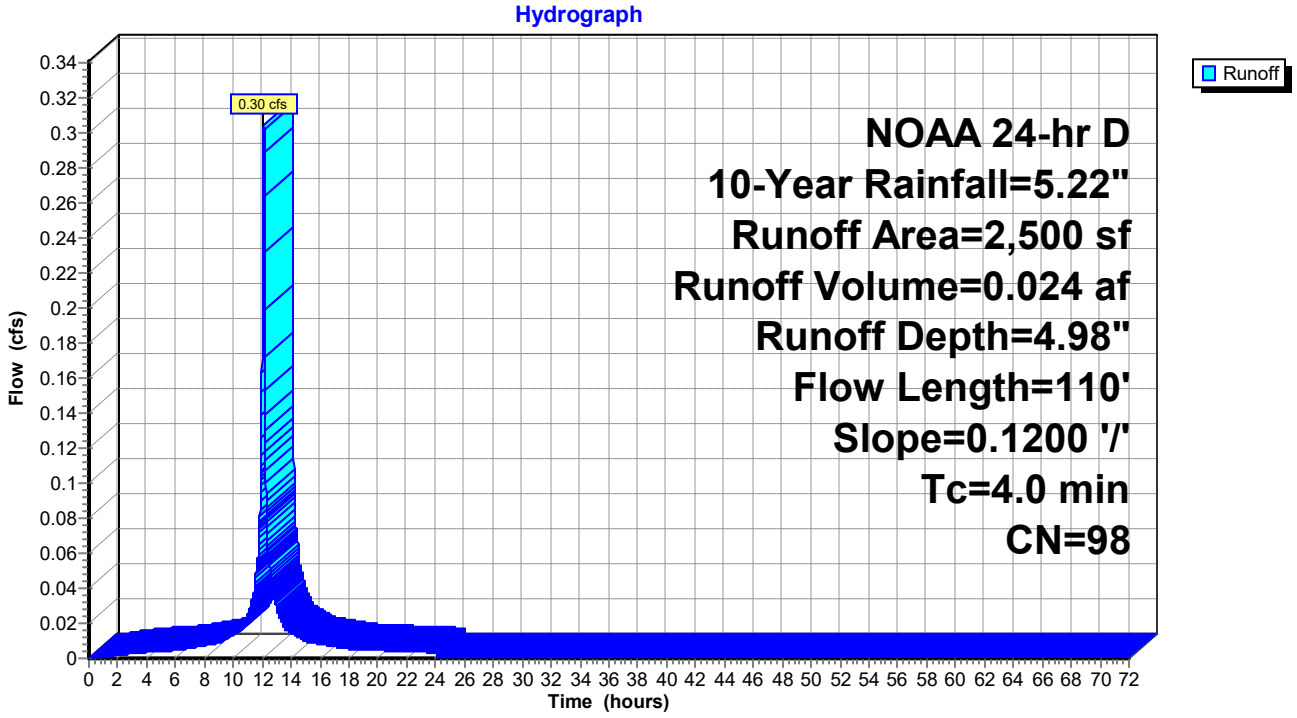
Runoff = 0.30 cfs @ 12.11 hrs, Volume= 0.024 af, Depth= 4.98"
Routed to Pond 30 : Basin 12

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
2,500	98	Paved parking, HSG C
2,500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.1200	0.22		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	60	0.1200	5.20		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.0	110	Total			

Subcatchment 27S: Basin 12 - Imp



Hydrograph for Subcatchment 27S: Basin 12 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.02	0.00
3.00	0.20	0.07	0.00
4.00	0.27	0.12	0.00
5.00	0.36	0.19	0.00
6.00	0.45	0.27	0.00
7.00	0.55	0.36	0.01
8.00	0.68	0.48	0.01
9.00	0.83	0.63	0.01
10.00	1.03	0.82	0.01
11.00	1.36	1.14	0.02
12.00	2.50	2.27	**0.18**
13.00	3.86	3.63	**0.03**
14.00	4.19	3.95	0.01
15.00	4.39	4.16	0.01
16.00	4.54	4.31	0.01
17.00	4.67	4.43	0.01
18.00	4.77	4.54	0.01
19.00	4.86	4.63	0.00
20.00	4.95	4.71	0.00
21.00	5.02	4.79	0.00
22.00	5.09	4.86	0.00
23.00	5.16	4.92	0.00
24.00	**5.22**	**4.98**	0.00
25.00	5.22	4.98	0.00
26.00	5.22	4.98	0.00
27.00	5.22	4.98	0.00
28.00	5.22	4.98	0.00
29.00	5.22	4.98	0.00
30.00	5.22	4.98	0.00
31.00	5.22	4.98	0.00
32.00	5.22	4.98	0.00
33.00	5.22	4.98	0.00
34.00	5.22	4.98	0.00
35.00	5.22	4.98	0.00
36.00	5.22	4.98	0.00
37.00	5.22	4.98	0.00
38.00	5.22	4.98	0.00
39.00	5.22	4.98	0.00
40.00	5.22	4.98	0.00
41.00	5.22	4.98	0.00
42.00	5.22	4.98	0.00
43.00	5.22	4.98	0.00
44.00	5.22	4.98	0.00
45.00	5.22	4.98	0.00
46.00	5.22	4.98	0.00
47.00	5.22	4.98	0.00
48.00	5.22	4.98	0.00
49.00	5.22	4.98	0.00
50.00	5.22	4.98	0.00
51.00	5.22	4.98	0.00
52.00	5.22	4.98	0.00
53.00	5.22	4.98	0.00
54.00	5.22	4.98	0.00
55.00	5.22	4.98	0.00
56.00	5.22	4.98	0.00
57.00	5.22	4.98	0.00
58.00	5.22	4.98	0.00
59.00	5.22	4.98	0.00
60.00	5.22	4.98	0.00
61.00	5.22	4.98	0.00
62.00	5.22	4.98	0.00
63.00	5.22	4.98	0.00
64.00	5.22	4.98	0.00
65.00	5.22	4.98	0.00
66.00	5.22	4.98	0.00
67.00	5.22	4.98	0.00
68.00	5.22	4.98	0.00
69.00	5.22	4.98	0.00
70.00	5.22	4.98	0.00
71.00	5.22	4.98	0.00
72.00	5.22	4.98	0.00

Summary for Subcatchment 29S: Basin 12 - Perv

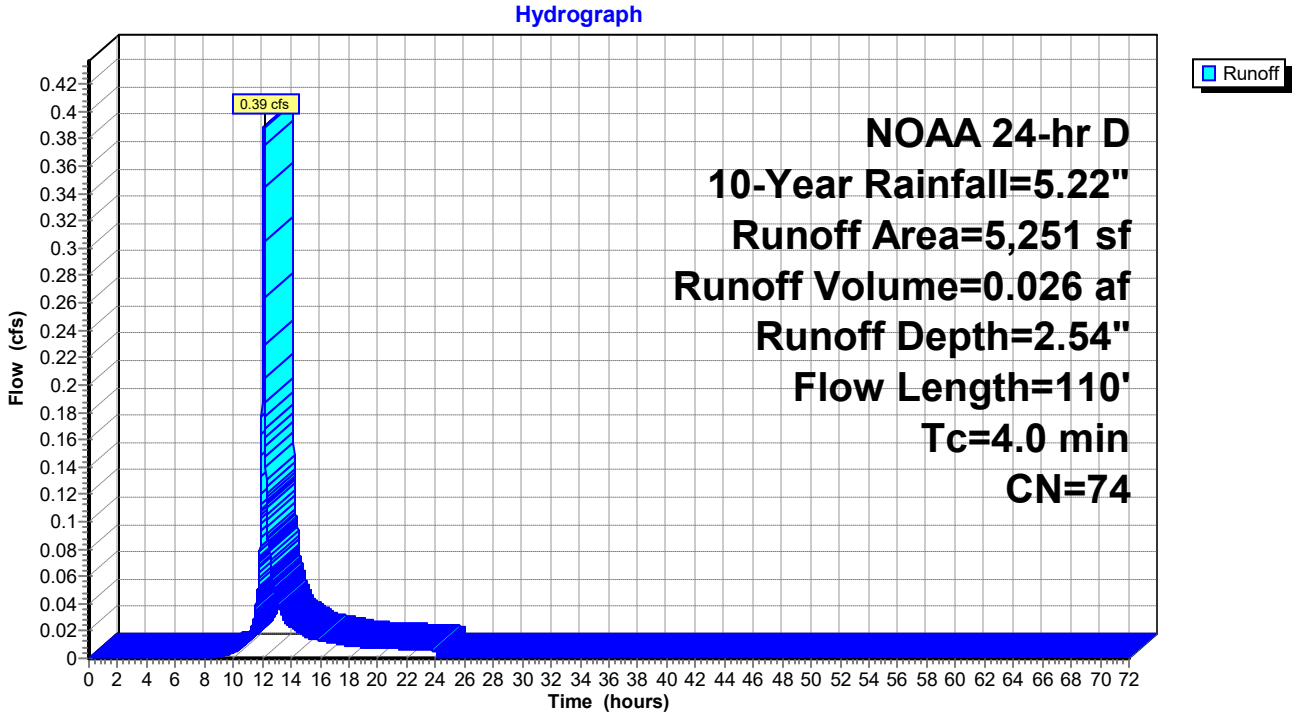
Runoff = 0.39 cfs @ 12.12 hrs, Volume= 0.026 af, Depth= 2.54"
Routed to Pond 30 : Basin 12

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.22"

Area (sf)	CN	Description
5,251	74	>75% Grass cover, Good, HSG C
5,251		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.1200	0.22		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	60	0.1200	5.20		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.0	110	Total			

Subcatchment 29S: Basin 12 - Perv



Hydrograph for Subcatchment 29S: Basin 12 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.55	0.00	0.00
8.00	0.68	0.00	0.00
9.00	0.83	0.00	0.00
10.00	1.03	0.03	0.00
11.00	1.36	0.10	0.01
12.00	2.50	0.61	**0.20**
13.00	3.86	1.50	**0.04**
14.00	4.19	1.73	0.02
15.00	4.39	1.89	0.02
16.00	4.54	2.01	0.01
17.00	4.67	2.10	0.01
18.00	4.77	2.19	0.01
19.00	4.86	2.26	0.01
20.00	4.95	2.32	0.01
21.00	5.02	2.38	0.01
22.00	5.09	2.44	0.01
23.00	5.16	2.49	0.01
24.00	**5.22**	**2.54**	0.01
25.00	5.22	2.54	0.00
26.00	5.22	2.54	0.00
27.00	5.22	2.54	0.00
28.00	5.22	2.54	0.00
29.00	5.22	2.54	0.00
30.00	5.22	2.54	0.00
31.00	5.22	2.54	0.00
32.00	5.22	2.54	0.00
33.00	5.22	2.54	0.00
34.00	5.22	2.54	0.00
35.00	5.22	2.54	0.00
36.00	5.22	2.54	0.00
37.00	5.22	2.54	0.00
38.00	5.22	2.54	0.00
39.00	5.22	2.54	0.00
40.00	5.22	2.54	0.00
41.00	5.22	2.54	0.00
42.00	5.22	2.54	0.00
43.00	5.22	2.54	0.00
44.00	5.22	2.54	0.00
45.00	5.22	2.54	0.00
46.00	5.22	2.54	0.00
47.00	5.22	2.54	0.00
48.00	5.22	2.54	0.00
49.00	5.22	2.54	0.00
50.00	5.22	2.54	0.00
51.00	5.22	2.54	0.00
52.00	5.22	2.54	0.00
53.00	5.22	2.54	0.00
54.00	5.22	2.54	0.00
55.00	5.22	2.54	0.00
56.00	5.22	2.54	0.00
57.00	5.22	2.54	0.00
58.00	5.22	2.54	0.00
59.00	5.22	2.54	0.00
60.00	5.22	2.54	0.00
61.00	5.22	2.54	0.00
62.00	5.22	2.54	0.00
63.00	5.22	2.54	0.00
64.00	5.22	2.54	0.00
65.00	5.22	2.54	0.00
66.00	5.22	2.54	0.00
67.00	5.22	2.54	0.00
68.00	5.22	2.54	0.00
69.00	5.22	2.54	0.00
70.00	5.22	2.54	0.00
71.00	5.22	2.54	0.00
72.00	5.22	2.54	0.00

Summary for Pond 30: Basin 12

Inflow Area = 0.178 ac, 32.25% Impervious, Inflow Depth = 3.33" for 10-Year event
Inflow = 0.69 cfs @ 12.11 hrs, Volume= 0.049 af
Outflow = 0.08 cfs @ 11.61 hrs, Volume= 0.049 af, Atten= 88%, Lag= 0.0 min
Discarded = 0.08 cfs @ 11.61 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 595.65' @ 12.85 hrs Surf.Area= 900 sf Storage= 595 cf

Plug-Flow detention time= 47.2 min calculated for 0.049 af (100% of inflow)
Center-of-Mass det. time= 47.2 min (844.2 - 797.0)

Volume	Invert	Avail.Storage	Storage Description
#1	594.00'	1,724 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 4,500 cf Overall - 191 cf Embedded = 4,309 cf x 40.0% Voids
#2	596.00'	151 cf	**8.00'D x 3.00'H Vertical Cone/Cylinder** Inside #1 191 cf Overall - 6.0" Wall Thickness = 151 cf
		1,874 cf	Total Available Storage

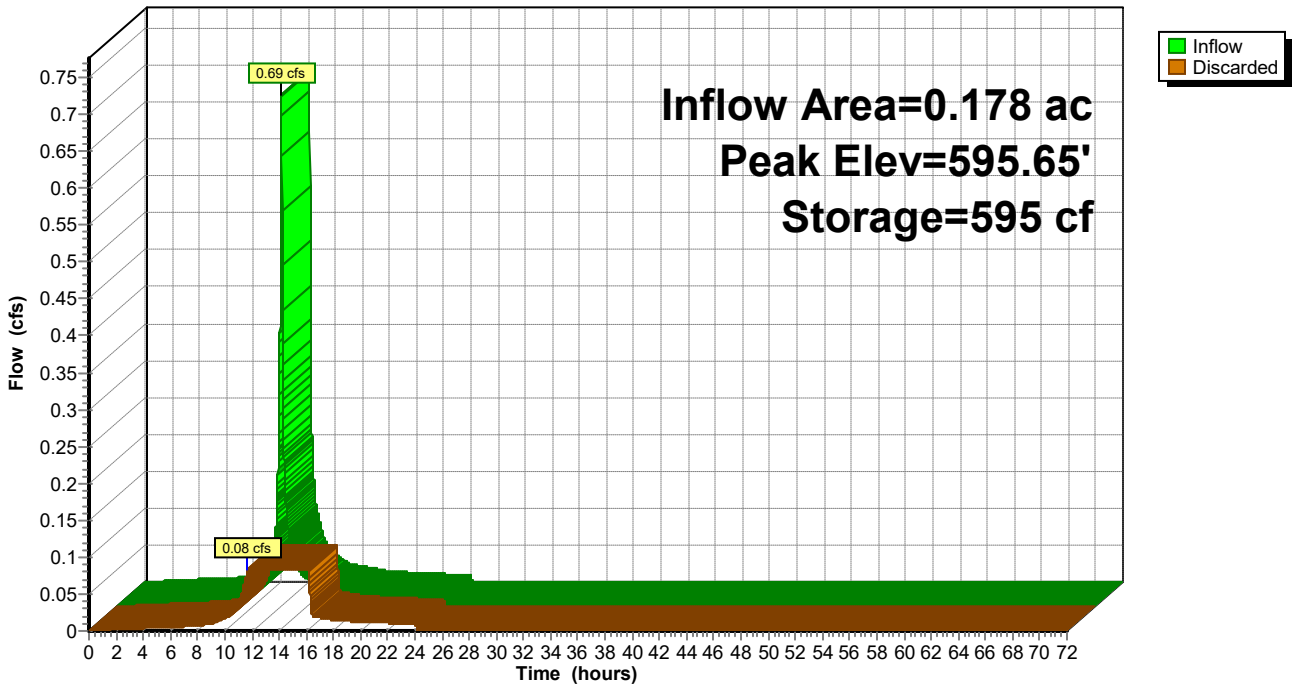
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.00	900	0	0
599.00	900	4,500	4,500

Device	Routing	Invert	Outlet Devices
#1	Discarded	594.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.08 cfs @ 11.61 hrs HW=594.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

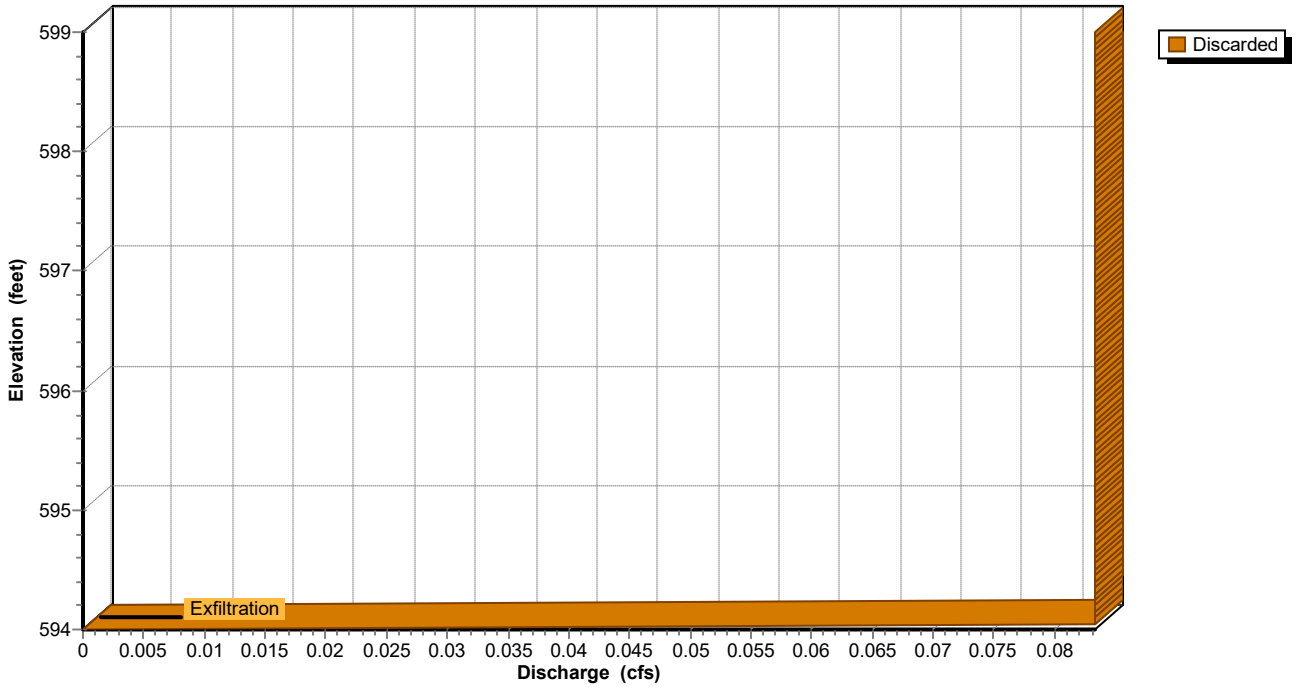
Pond 30: Basin 12

Hydrograph



Pond 30: Basin 12

Stage-Discharge



Hydrograph for Pond 30: Basin 12

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	594.00	0.00
2.00	0.00	0	594.00	0.00
4.00	0.00	1	594.00	0.00
6.00	0.00	1	594.00	0.00
8.00	0.01	2	594.00	0.01
10.00	0.02	4	594.01	**0.02**
12.00	**0.38**	**148**	**594.41**	**0.08**
14.00	**0.04**	**470**	**595.31**	0.08
16.00	0.02	67	594.19	0.08
18.00	0.01	3	594.01	0.01
20.00	0.01	3	594.01	0.01
22.00	0.01	2	594.01	0.01
24.00	0.01	2	594.01	0.01
26.00	0.00	0	594.00	0.00
28.00	0.00	0	594.00	0.00
30.00	0.00	0	594.00	0.00
32.00	0.00	0	594.00	0.00
34.00	0.00	0	594.00	0.00
36.00	0.00	0	594.00	0.00
38.00	0.00	0	594.00	0.00
40.00	0.00	0	594.00	0.00
42.00	0.00	0	594.00	0.00
44.00	0.00	0	594.00	0.00
46.00	0.00	0	594.00	0.00
48.00	0.00	0	594.00	0.00
50.00	0.00	0	594.00	0.00
52.00	0.00	0	594.00	0.00
54.00	0.00	0	594.00	0.00
56.00	0.00	0	594.00	0.00
58.00	0.00	0	594.00	0.00
60.00	0.00	0	594.00	0.00
62.00	0.00	0	594.00	0.00
64.00	0.00	0	594.00	0.00
66.00	0.00	0	594.00	0.00
68.00	0.00	0	594.00	0.00
70.00	0.00	0	594.00	0.00
72.00	0.00	0	594.00	0.00

Stage-Discharge for Pond 30: Basin 12

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
594.00	**0.00**	596.55	0.08
594.05	**0.08**	596.60	0.08
594.10	0.08	596.65	0.08
594.15	0.08	596.70	0.08
594.20	0.08	596.75	0.08
594.25	0.08	596.80	0.08
594.30	0.08	596.85	0.08
594.35	0.08	596.90	0.08
594.40	0.08	596.95	0.08
594.45	0.08	597.00	0.08
594.50	0.08	597.05	0.08
594.55	0.08	597.10	0.08
594.60	0.08	597.15	0.08
594.65	0.08	597.20	0.08
594.70	0.08	597.25	0.08
594.75	0.08	597.30	0.08
594.80	0.08	597.35	0.08
594.85	0.08	597.40	0.08
594.90	0.08	597.45	0.08
594.95	0.08	597.50	0.08
595.00	0.08	597.55	0.08
595.05	0.08	597.60	0.08
595.10	0.08	597.65	0.08
595.15	0.08	597.70	0.08
595.20	0.08	597.75	0.08
595.25	0.08	597.80	0.08
595.30	0.08	597.85	0.08
595.35	0.08	597.90	0.08
595.40	0.08	597.95	0.08
595.45	0.08	598.00	0.08
595.50	0.08	598.05	0.08
595.55	0.08	598.10	0.08
595.60	0.08	598.15	0.08
595.65	0.08	598.20	0.08
595.70	0.08	598.25	0.08
595.75	0.08	598.30	0.08
595.80	0.08	598.35	0.08
595.85	0.08	598.40	0.08
595.90	0.08	598.45	0.08
595.95	0.08	598.50	0.08
596.00	0.08	598.55	0.08
596.05	0.08	598.60	0.08
596.10	0.08	598.65	0.08
596.15	0.08	598.70	0.08
596.20	0.08	598.75	0.08
596.25	0.08	598.80	0.08
596.30	0.08	598.85	0.08
596.35	0.08	598.90	0.08
596.40	0.08	598.95	0.08
596.45	0.08	599.00	0.08
596.50	0.08		

Stage-Area-Storage for Pond 30: Basin 12

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
594.00	**900**	0
594.05	900	18
594.10	900	36
594.15	900	54
594.20	900	72
594.25	900	90
594.30	900	108
594.35	900	126
594.40	900	144
594.45	900	162
594.50	900	180
594.55	900	198
594.60	900	216
594.65	900	234
594.70	900	252
594.75	900	270
594.80	900	288
594.85	900	306
594.90	900	324
594.95	900	342
595.00	900	360
595.05	900	378
595.10	900	396
595.15	900	414
595.20	900	432
595.25	900	450
595.30	900	468
595.35	900	486
595.40	900	504
595.45	900	522
595.50	900	540
595.55	900	558
595.60	900	576
595.65	900	594
595.70	900	612
595.75	900	630
595.80	900	648
595.85	900	666
595.90	900	684
595.95	900	702
596.00	900	720
596.05	900	739
596.10	900	758
596.15	900	778
596.20	900	797
596.25	900	816
596.30	900	835
596.35	900	855
596.40	900	874
596.45	900	893
596.50	900	912
596.55	900	932
596.60	900	951
596.65	900	970
596.70	900	989
596.75	900	1,009
596.80	900	1,028
596.85	900	1,047
596.90	900	1,066
596.95	900	1,086
597.00	900	1,105
597.05	900	1,124
597.10	900	1,143
597.15	900	1,163
597.20	900	1,182
597.25	900	1,201
597.30	900	1,220
597.35	900	1,240
597.40	900	1,259
597.45	900	1,278
597.50	900	1,297
597.55	900	1,316
597.60	900	1,336
597.65	900	1,355
597.70	900	1,374
597.75	900	1,393
597.80	900	1,413
597.85	900	1,432
597.90	900	1,451
597.95	900	1,470
598.00	900	1,490
598.05	900	1,509
598.10	900	1,528
598.15	900	1,547
598.20	900	1,567
598.25	900	1,586
598.30	900	1,605
598.35	900	1,624
598.40	900	1,644
598.45	900	1,663
598.50	900	1,682
598.55	900	1,701
598.60	900	1,721
598.65	900	1,740
598.70	900	1,759
598.75	900	1,778
598.80	900	1,797
598.85	900	1,817
598.90	900	1,836
598.95	900	1,855
599.00	900	**1,874**

Summary for Subcatchment 26S: Basin 12 pre-dev

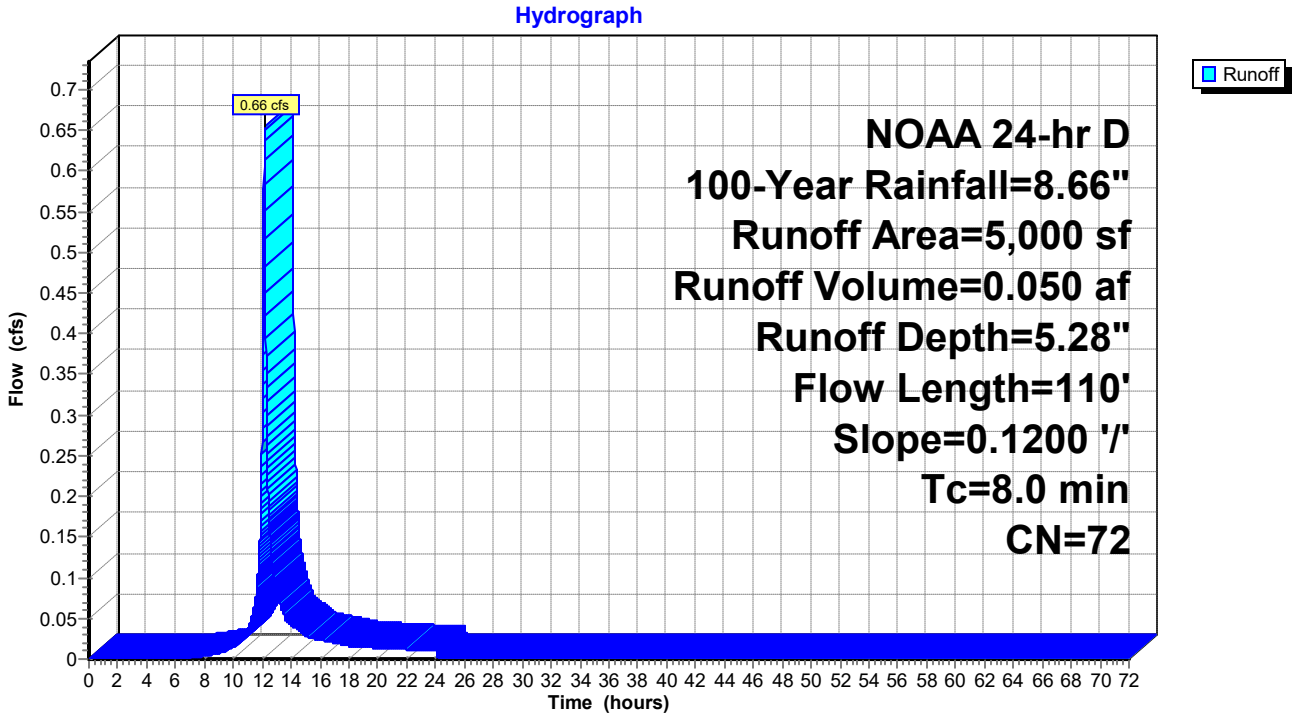
Runoff = 0.66 cfs @ 12.15 hrs, Volume= 0.050 af, Depth= 5.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
5,000	72	Woods/grass comb., Good, HSG C
5,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	70	0.1200	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.47"
0.4	40	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.0	110	Total			

Subcatchment 26S: Basin 12 pre-dev



Hydrograph for Subcatchment 26S: Basin 12 pre-dev

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.00	0.00
2.00	0.21	0.00	0.00
3.00	0.33	0.00	0.00
4.00	0.45	0.00	0.00
5.00	0.59	0.00	0.00
6.00	0.74	0.00	0.00
7.00	0.91	0.00	0.00
8.00	1.12	0.03	0.00
9.00	1.37	0.08	0.01
10.00	1.72	0.18	0.02
11.00	2.25	0.40	0.04
12.00	4.15	1.57	**0.30**
13.00	6.41	3.33	**0.08**
14.00	6.94	3.78	0.04
15.00	7.29	4.07	0.03
16.00	7.54	4.29	0.02
17.00	7.75	4.47	0.02
18.00	7.92	4.62	0.02
19.00	8.07	4.75	0.01
20.00	8.21	4.88	0.01
21.00	8.33	4.99	0.01
22.00	8.45	5.09	0.01
23.00	8.56	5.19	0.01
24.00	**8.66**	**5.28**	0.01
25.00	8.66	5.28	0.00
26.00	8.66	5.28	0.00
27.00	8.66	5.28	0.00
28.00	8.66	5.28	0.00
29.00	8.66	5.28	0.00
30.00	8.66	5.28	0.00
31.00	8.66	5.28	0.00
32.00	8.66	5.28	0.00
33.00	8.66	5.28	0.00
34.00	8.66	5.28	0.00
35.00	8.66	5.28	0.00
36.00	8.66	5.28	0.00
37.00	8.66	5.28	0.00
38.00	8.66	5.28	0.00
39.00	8.66	5.28	0.00
40.00	8.66	5.28	0.00
41.00	8.66	5.28	0.00
42.00	8.66	5.28	0.00
43.00	8.66	5.28	0.00
44.00	8.66	5.28	0.00
45.00	8.66	5.28	0.00
46.00	8.66	5.28	0.00
47.00	8.66	5.28	0.00
48.00	8.66	5.28	0.00
49.00	8.66	5.28	0.00
50.00	8.66	5.28	0.00
51.00	8.66	5.28	0.00
52.00	8.66	5.28	0.00
53.00	8.66	5.28	0.00
54.00	8.66	5.28	0.00
55.00	8.66	5.28	0.00
56.00	8.66	5.28	0.00
57.00	8.66	5.28	0.00
58.00	8.66	5.28	0.00
59.00	8.66	5.28	0.00
60.00	8.66	5.28	0.00
61.00	8.66	5.28	0.00
62.00	8.66	5.28	0.00
63.00	8.66	5.28	0.00
64.00	8.66	5.28	0.00
65.00	8.66	5.28	0.00
66.00	8.66	5.28	0.00
67.00	8.66	5.28	0.00
68.00	8.66	5.28	0.00
69.00	8.66	5.28	0.00
70.00	8.66	5.28	0.00
71.00	8.66	5.28	0.00
72.00	8.66	5.28	0.00

Summary for Subcatchment 27S: Basin 12 - Imp

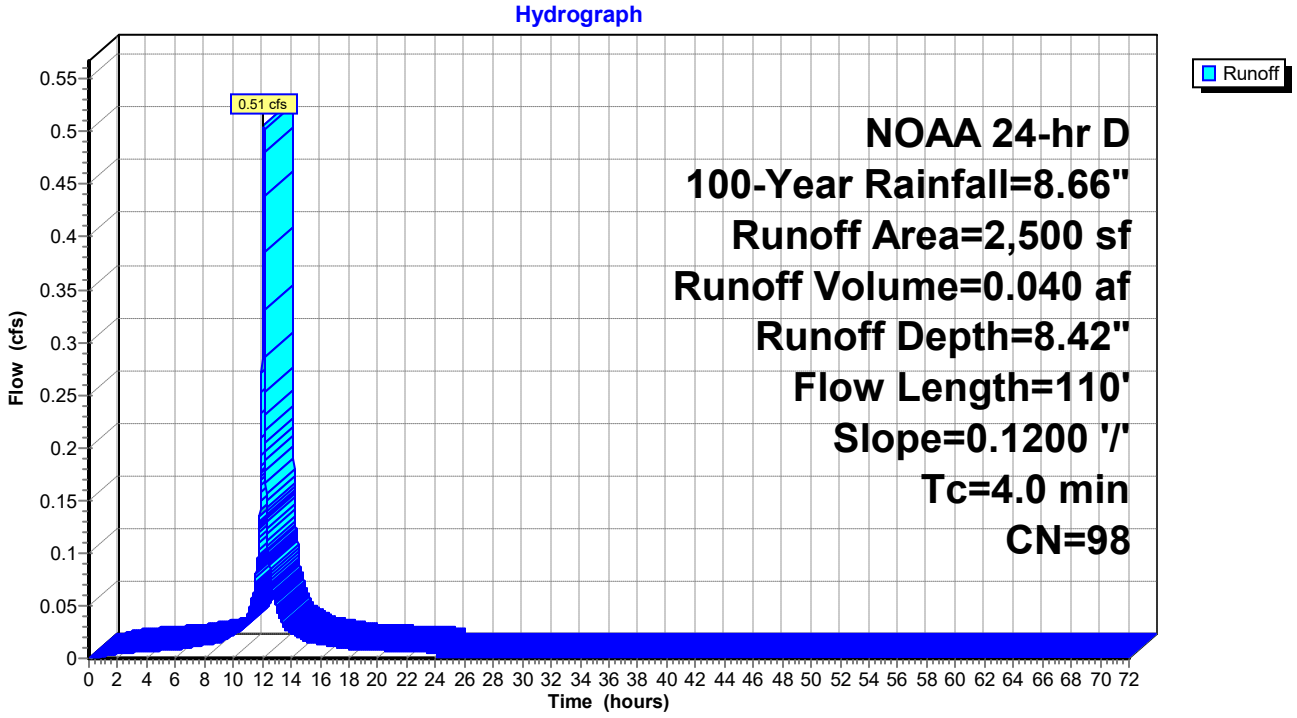
Runoff = 0.51 cfs @ 12.11 hrs, Volume= 0.040 af, Depth= 8.42"
Routed to Pond 30 : Basin 12

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
2,500	98	Paved parking, HSG C
2,500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.1200	0.22		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	60	0.1200	5.20		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.0	110	Total			

Subcatchment 27S: Basin 12 - Imp



Hydrograph for Subcatchment 27S: Basin 12 - Imp

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.01	0.00
2.00	0.21	0.08	0.00
3.00	0.33	0.17	0.01
4.00	0.45	0.28	0.01
5.00	0.59	0.40	0.01
6.00	0.74	0.54	0.01
7.00	0.91	0.71	0.01
8.00	1.12	0.91	0.01
9.00	1.37	1.16	0.02
10.00	1.72	1.49	0.02
11.00	2.25	2.02	0.04
12.00	4.15	3.91	**0.30**
13.00	6.41	6.17	**0.05**
14.00	6.94	6.70	0.02
15.00	7.29	7.05	0.02
16.00	7.54	7.30	0.01
17.00	7.75	7.51	0.01
18.00	7.92	7.68	0.01
19.00	8.07	7.83	0.01
20.00	8.21	7.97	0.01
21.00	8.33	8.09	0.01
22.00	8.45	8.21	0.01
23.00	8.56	8.32	0.01
24.00	**8.66**	**8.42**	0.01
25.00	8.66	8.42	0.00
26.00	8.66	8.42	0.00
27.00	8.66	8.42	0.00
28.00	8.66	8.42	0.00
29.00	8.66	8.42	0.00
30.00	8.66	8.42	0.00
31.00	8.66	8.42	0.00
32.00	8.66	8.42	0.00
33.00	8.66	8.42	0.00
34.00	8.66	8.42	0.00
35.00	8.66	8.42	0.00
36.00	8.66	8.42	0.00
37.00	8.66	8.42	0.00
38.00	8.66	8.42	0.00
39.00	8.66	8.42	0.00
40.00	8.66	8.42	0.00
41.00	8.66	8.42	0.00
42.00	8.66	8.42	0.00
43.00	8.66	8.42	0.00
44.00	8.66	8.42	0.00
45.00	8.66	8.42	0.00
46.00	8.66	8.42	0.00
47.00	8.66	8.42	0.00
48.00	8.66	8.42	0.00
49.00	8.66	8.42	0.00
50.00	8.66	8.42	0.00
51.00	8.66	8.42	0.00
52.00	8.66	8.42	0.00
53.00	8.66	8.42	0.00
54.00	8.66	8.42	0.00
55.00	8.66	8.42	0.00
56.00	8.66	8.42	0.00
57.00	8.66	8.42	0.00
58.00	8.66	8.42	0.00
59.00	8.66	8.42	0.00
60.00	8.66	8.42	0.00
61.00	8.66	8.42	0.00
62.00	8.66	8.42	0.00
63.00	8.66	8.42	0.00
64.00	8.66	8.42	0.00
65.00	8.66	8.42	0.00
66.00	8.66	8.42	0.00
67.00	8.66	8.42	0.00
68.00	8.66	8.42	0.00
69.00	8.66	8.42	0.00
70.00	8.66	8.42	0.00
71.00	8.66	8.42	0.00
72.00	8.66	8.42	0.00

Summary for Subcatchment 29S: Basin 12 - Perv

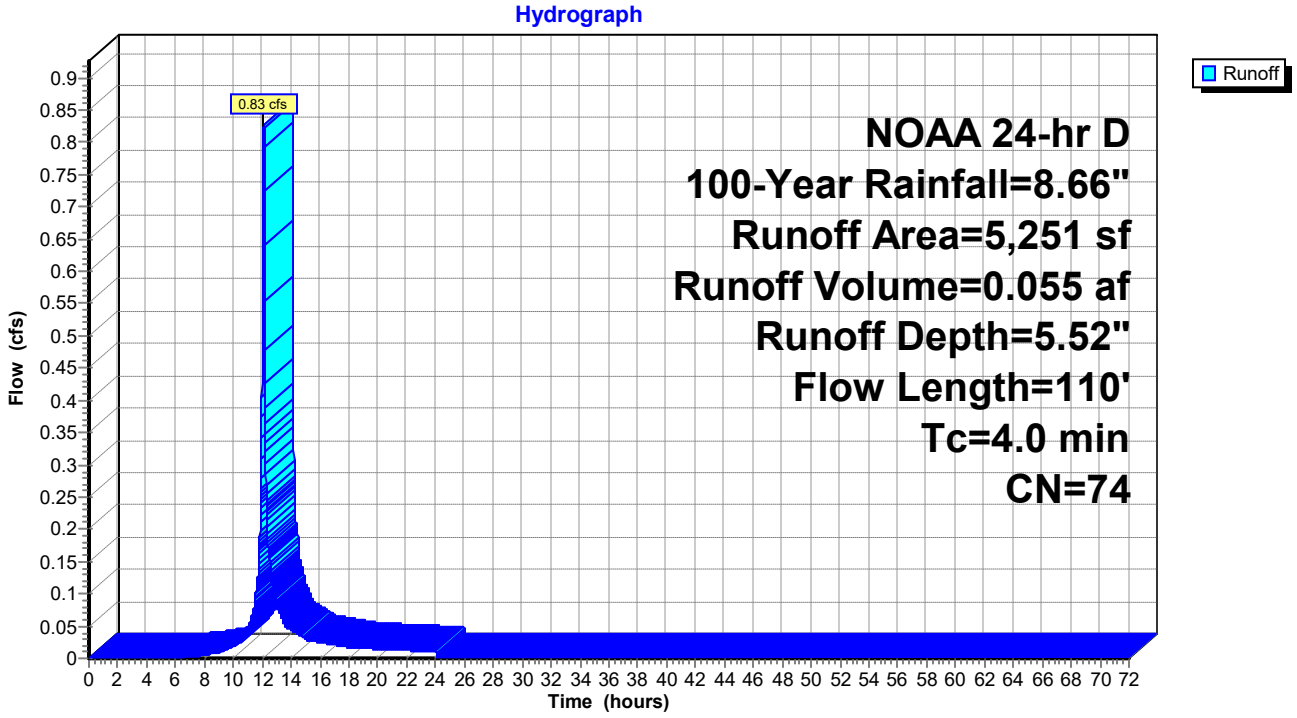
Runoff = 0.83 cfs @ 12.11 hrs, Volume= 0.055 af, Depth= 5.52"
Routed to Pond 30 : Basin 12

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.66"

Area (sf)	CN	Description
5,251	74	>75% Grass cover, Good, HSG C
5,251		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.1200	0.22		**Sheet Flow, Sheet Flow (A-B)** Grass: Dense n= 0.240 P2= 3.47"
0.2	60	0.1200	5.20		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.0	110	Total			

Subcatchment 29S: Basin 12 - Perv



Hydrograph for Subcatchment 29S: Basin 12 - Perv

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.10	0.00	0.00
2.00	0.21	0.00	0.00
3.00	0.33	0.00	0.00
4.00	0.45	0.00	0.00
5.00	0.59	0.00	0.00
6.00	0.74	0.00	0.00
7.00	0.91	0.01	0.00
8.00	1.12	0.05	0.01
9.00	1.37	0.11	0.01
10.00	1.72	0.23	0.02
11.00	2.25	0.47	0.04
12.00	4.15	1.71	**0.45**
13.00	6.41	3.53	**0.09**
14.00	6.94	3.99	0.04
15.00	7.29	4.29	0.03
16.00	7.54	4.51	0.03
17.00	7.75	4.70	0.02
18.00	7.92	4.85	0.02
19.00	8.07	4.99	0.02
20.00	8.21	5.11	0.01
21.00	8.33	5.23	0.01
22.00	8.45	5.33	0.01
23.00	8.56	5.43	0.01
24.00	**8.66**	**5.52**	0.01
25.00	8.66	5.52	0.00
26.00	8.66	5.52	0.00
27.00	8.66	5.52	0.00
28.00	8.66	5.52	0.00
29.00	8.66	5.52	0.00
30.00	8.66	5.52	0.00
31.00	8.66	5.52	0.00
32.00	8.66	5.52	0.00
33.00	8.66	5.52	0.00
34.00	8.66	5.52	0.00
35.00	8.66	5.52	0.00
36.00	8.66	5.52	0.00
37.00	8.66	5.52	0.00
38.00	8.66	5.52	0.00
39.00	8.66	5.52	0.00
40.00	8.66	5.52	0.00
41.00	8.66	5.52	0.00
42.00	8.66	5.52	0.00
43.00	8.66	5.52	0.00
44.00	8.66	5.52	0.00
45.00	8.66	5.52	0.00
46.00	8.66	5.52	0.00
47.00	8.66	5.52	0.00
48.00	8.66	5.52	0.00
49.00	8.66	5.52	0.00
50.00	8.66	5.52	0.00
51.00	8.66	5.52	0.00
52.00	8.66	5.52	0.00
53.00	8.66	5.52	0.00
54.00	8.66	5.52	0.00
55.00	8.66	5.52	0.00
56.00	8.66	5.52	0.00
57.00	8.66	5.52	0.00
58.00	8.66	5.52	0.00
59.00	8.66	5.52	0.00
60.00	8.66	5.52	0.00
61.00	8.66	5.52	0.00
62.00	8.66	5.52	0.00
63.00	8.66	5.52	0.00
64.00	8.66	5.52	0.00
65.00	8.66	5.52	0.00
66.00	8.66	5.52	0.00
67.00	8.66	5.52	0.00
68.00	8.66	5.52	0.00
69.00	8.66	5.52	0.00
70.00	8.66	5.52	0.00
71.00	8.66	5.52	0.00
72.00	8.66	5.52	0.00

Summary for Pond 30: Basin 12

Inflow Area = 0.178 ac, 32.25% Impervious, Inflow Depth = 6.46" for 100-Year event
Inflow = 1.33 cfs @ 12.11 hrs, Volume= 0.096 af
Outflow = 0.08 cfs @ 11.03 hrs, Volume= 0.096 af, Atten= 94%, Lag= 0.0 min
Discarded = 0.08 cfs @ 11.03 hrs, Volume= 0.096 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 598.42' @ 13.54 hrs Surf.Area= 900 sf Storage= 1,652 cf

Plug-Flow detention time= 159.5 min calculated for 0.096 af (100% of inflow)
Center-of-Mass det. time= 159.4 min (945.0 - 785.6)

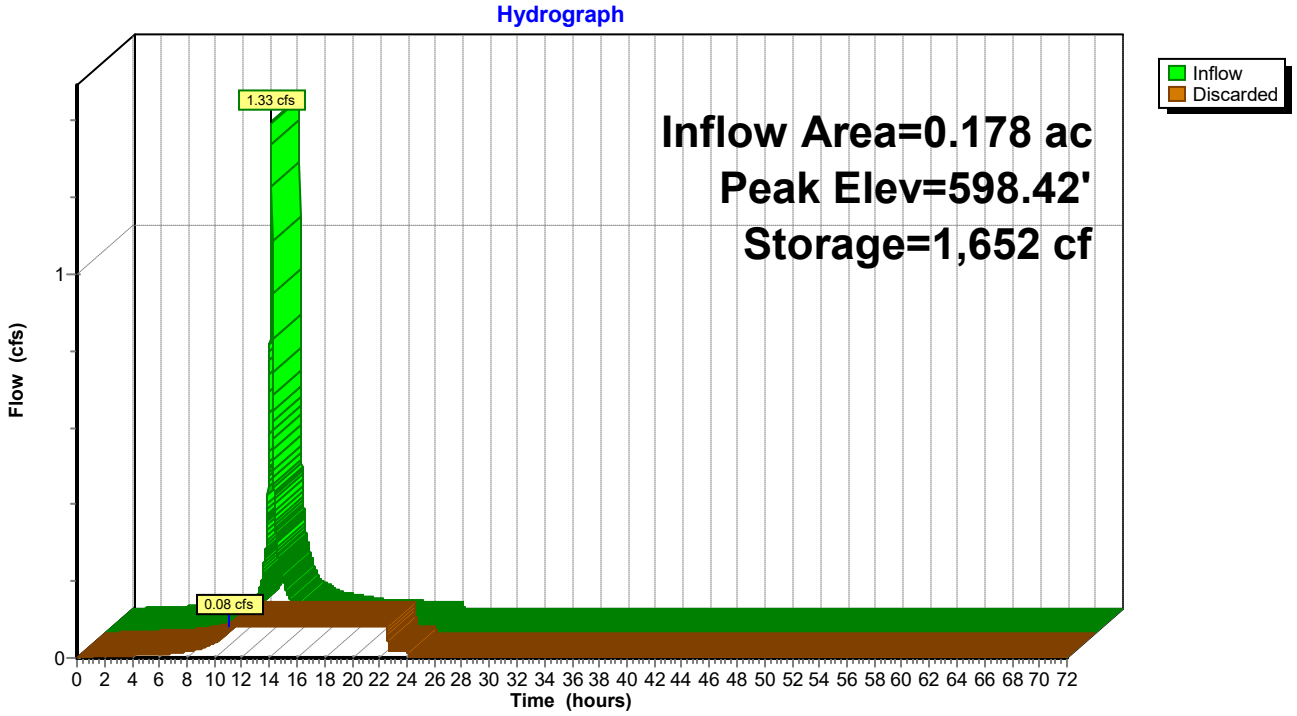
Volume	Invert	Avail.Storage	Storage Description
#1	594.00'	1,724 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 4,500 cf Overall - 191 cf Embedded = 4,309 cf x 40.0% Voids
#2	596.00'	151 cf	**8.00'D x 3.00'H Vertical Cone/Cylinder** Inside #1 191 cf Overall - 6.0" Wall Thickness = 151 cf
		1,874 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.00	900	0	0
599.00	900	4,500	4,500

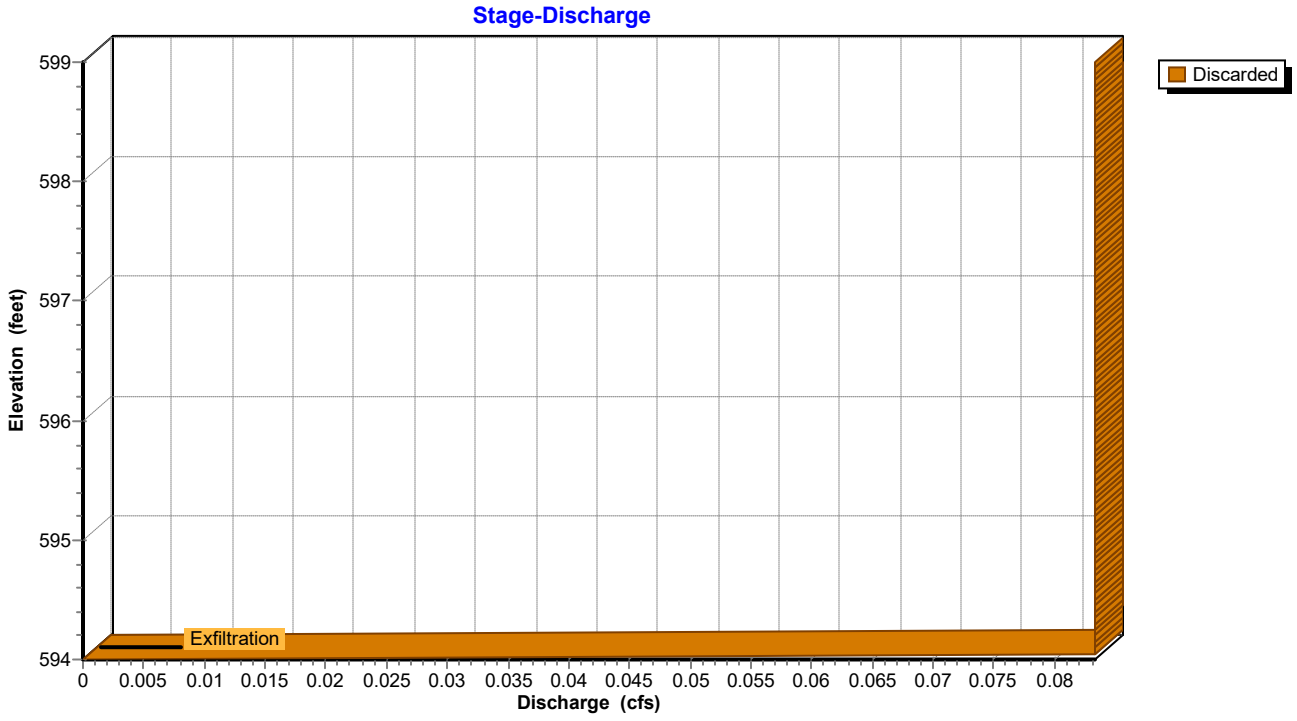
Device	Routing	Invert	Outlet Devices
#1	Discarded	594.00'	**4.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.08 cfs @ 11.03 hrs HW=594.05' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Pond 30: Basin 12



Pond 30: Basin 12



Hydrograph for Pond 30: Basin 12

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	594.00	0.00
2.00	0.00	1	594.00	0.00
4.00	0.01	1	594.00	0.01
6.00	0.01	2	594.01	0.01
8.00	0.02	4	594.01	0.02
10.00	0.04	9	594.02	**0.04**
12.00	**0.75**	**497**	**595.38**	**0.08**
14.00	**0.07**	**1,637**	**598.38**	0.08
16.00	0.04	1,394	597.75	0.08
18.00	0.03	1,027	596.80	0.08
20.00	0.02	599	595.66	0.08
22.00	0.02	148	594.41	0.08
24.00	0.02	3	594.01	0.02
26.00	0.00	0	594.00	0.00
28.00	0.00	0	594.00	0.00
30.00	0.00	0	594.00	0.00
32.00	0.00	0	594.00	0.00
34.00	0.00	0	594.00	0.00
36.00	0.00	0	594.00	0.00
38.00	0.00	0	594.00	0.00
40.00	0.00	0	594.00	0.00
42.00	0.00	0	594.00	0.00
44.00	0.00	0	594.00	0.00
46.00	0.00	0	594.00	0.00
48.00	0.00	0	594.00	0.00
50.00	0.00	0	594.00	0.00
52.00	0.00	0	594.00	0.00
54.00	0.00	0	594.00	0.00
56.00	0.00	0	594.00	0.00
58.00	0.00	0	594.00	0.00
60.00	0.00	0	594.00	0.00
62.00	0.00	0	594.00	0.00
64.00	0.00	0	594.00	0.00
66.00	0.00	0	594.00	0.00
68.00	0.00	0	594.00	0.00
70.00	0.00	0	594.00	0.00
72.00	0.00	0	594.00	0.00

Stage-Discharge for Pond 30: Basin 12

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
594.00	**0.00**	596.55	0.08
594.05	**0.08**	596.60	0.08
594.10	0.08	596.65	0.08
594.15	0.08	596.70	0.08
594.20	0.08	596.75	0.08
594.25	0.08	596.80	0.08
594.30	0.08	596.85	0.08
594.35	0.08	596.90	0.08
594.40	0.08	596.95	0.08
594.45	0.08	597.00	0.08
594.50	0.08	597.05	0.08
594.55	0.08	597.10	0.08
594.60	0.08	597.15	0.08
594.65	0.08	597.20	0.08
594.70	0.08	597.25	0.08
594.75	0.08	597.30	0.08
594.80	0.08	597.35	0.08
594.85	0.08	597.40	0.08
594.90	0.08	597.45	0.08
594.95	0.08	597.50	0.08
595.00	0.08	597.55	0.08
595.05	0.08	597.60	0.08
595.10	0.08	597.65	0.08
595.15	0.08	597.70	0.08
595.20	0.08	597.75	0.08
595.25	0.08	597.80	0.08
595.30	0.08	597.85	0.08
595.35	0.08	597.90	0.08
595.40	0.08	597.95	0.08
595.45	0.08	598.00	0.08
595.50	0.08	598.05	0.08
595.55	0.08	598.10	0.08
595.60	0.08	598.15	0.08
595.65	0.08	598.20	0.08
595.70	0.08	598.25	0.08
595.75	0.08	598.30	0.08
595.80	0.08	598.35	0.08
595.85	0.08	598.40	0.08
595.90	0.08	598.45	0.08
595.95	0.08	598.50	0.08
596.00	0.08	598.55	0.08
596.05	0.08	598.60	0.08
596.10	0.08	598.65	0.08
596.15	0.08	598.70	0.08
596.20	0.08	598.75	0.08
596.25	0.08	598.80	0.08
596.30	0.08	598.85	0.08
596.35	0.08	598.90	0.08
596.40	0.08	598.95	0.08
596.45	0.08	599.00	0.08
596.50	0.08		

Stage-Area-Storage for Pond 30: Basin 12

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
594.00	**900**	0	596.55	900	932
594.05	900	18	596.60	900	951
594.10	900	36	596.65	900	970
594.15	900	54	596.70	900	989
594.20	900	72	596.75	900	1,009
594.25	900	90	596.80	900	1,028
594.30	900	108	596.85	900	1,047
594.35	900	126	596.90	900	1,066
594.40	900	144	596.95	900	1,086
594.45	900	162	597.00	900	1,105
594.50	900	180	597.05	900	1,124
594.55	900	198	597.10	900	1,143
594.60	900	216	597.15	900	1,163
594.65	900	234	597.20	900	1,182
594.70	900	252	597.25	900	1,201
594.75	900	270	597.30	900	1,220
594.80	900	288	597.35	900	1,240
594.85	900	306	597.40	900	1,259
594.90	900	324	597.45	900	1,278
594.95	900	342	597.50	900	1,297
595.00	900	360	597.55	900	1,316
595.05	900	378	597.60	900	1,336
595.10	900	396	597.65	900	1,355
595.15	900	414	597.70	900	1,374
595.20	900	432	597.75	900	1,393
595.25	900	450	597.80	900	1,413
595.30	900	468	597.85	900	1,432
595.35	900	486	597.90	900	1,451
595.40	900	504	597.95	900	1,470
595.45	900	522	598.00	900	1,490
595.50	900	540	598.05	900	1,509
595.55	900	558	598.10	900	1,528
595.60	900	576	598.15	900	1,547
595.65	900	594	598.20	900	1,567
595.70	900	612	598.25	900	1,586
595.75	900	630	598.30	900	1,605
595.80	900	648	598.35	900	1,624
595.85	900	666	598.40	900	1,644
595.90	900	684	598.45	900	1,663
595.95	900	702	598.50	900	1,682
596.00	900	720	598.55	900	1,701
596.05	900	739	598.60	900	1,721
596.10	900	758	598.65	900	1,740
596.15	900	778	598.70	900	1,759
596.20	900	797	598.75	900	1,778
596.25	900	816	598.80	900	1,797
596.30	900	835	598.85	900	1,817
596.35	900	855	598.90	900	1,836
596.40	900	874	598.95	900	1,855
596.45	900	893	599.00	900	**1,874**
596.50	900	912			

Events for Subcatchment 26S: Basin 12 pre-dev

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2-Year	3.44	0.13	0.010	1.08
10-Year	5.22	0.30	0.023	2.37
100-Year	**8.66**	**0.66**	**0.050**	**5.28**

Events for Subcatchment 27S: Basin 12 - Imp

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2-Year	3.44	0.20	0.015	3.21
10-Year	5.22	0.30	0.024	4.98
100-Year	**8.66**	**0.51**	**0.040**	**8.42**

Events for Subcatchment 29S: Basin 12 - Perv

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2-Year	3.44	0.18	0.012	1.20
10-Year	5.22	0.39	0.026	2.54
100-Year	**8.66**	**0.83**	**0.055**	**5.52**

Events for Pond 30: Basin 12

Event	Inflow (cfs)	Discarded (cfs)	Elevation (feet)	Storage (cubic-feet)
2-Year	0.38	**0.08**	594.60	215
10-Year	0.69	0.08	595.65	595
100-Year	**1.33**	0.08	**598.42**	**1,652**

24hr # 1

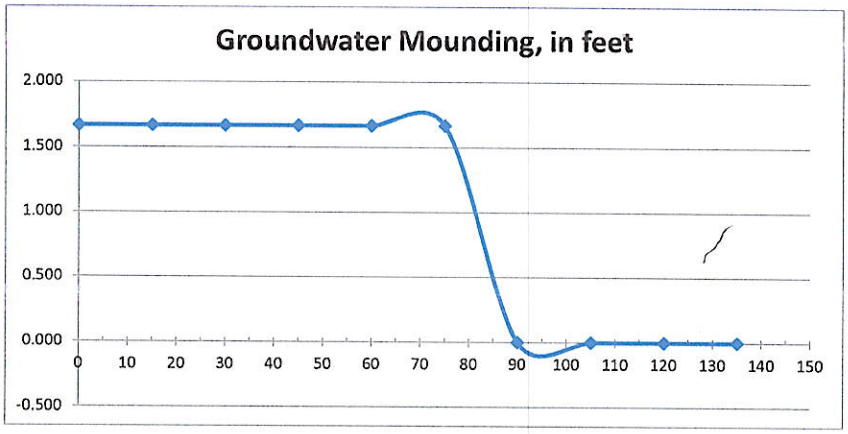
Input Values

10.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.05	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
80.000	x	1/2 length of basin (x direction, in feet)
102.000	y	1/2 width of basin (y direction, in feet)
0.30	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

11.667	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.667	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.667	0
1.667	15
1.667	30
1.667	45
1.667	60
1.667	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



Disclaimer

This spreadsheet solving the Hantush (1967) equation for ground-water mounding beneath an infiltration basin is made available to the general public as a convenience for those wishing to replicate values documented in the USGS Scientific Investigations Report 2010-5102 "Groundwater mounding beneath hypothetical stormwater infiltration basins" or to calculate values based on user-specified site conditions. Any changes made to the spreadsheet (other than values identified as user-specified) after transmission from the USGS could have unintended, undesirable consequences. These consequences could include, but may not be limited to: erroneous output, numerical instabilities, and violations of underlying assumptions that are inherent in results presented in the accompanying USGS published report. The USGS assumes no responsibility for the consequences of any changes made to the spreadsheet. If changes are made to the spreadsheet, the user is responsible for documenting the changes and justifying the results and conclusions.

#2

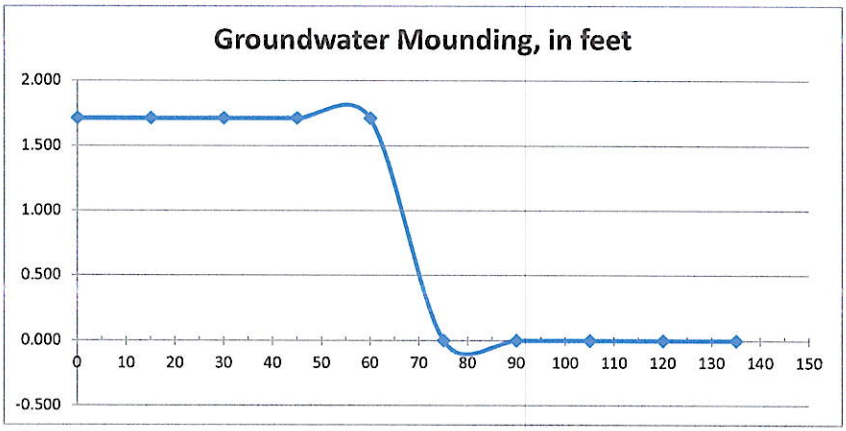
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.13	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
68.500	x	1/2 length of basin (x direction, in feet)
92.200	y	1/2 width of basin (y direction, in feet)
0.77	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

11.711	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.711	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.711	0
1.711	15
1.711	30
1.711	45
1.711	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

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#3

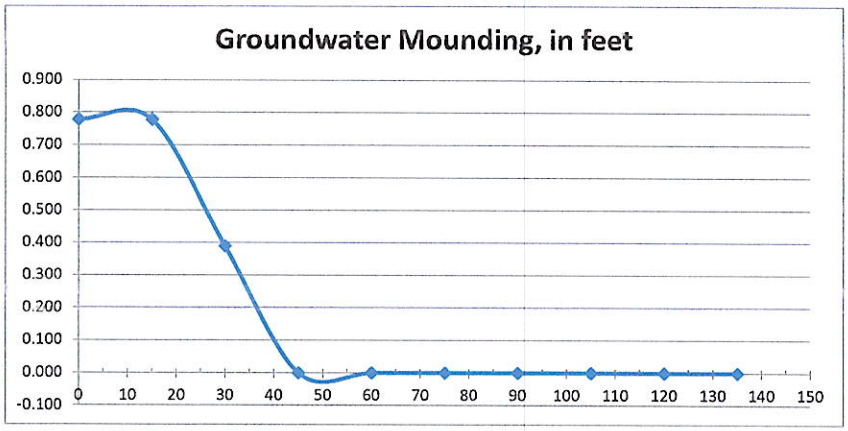
Input Values

5.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.28	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
43.560	y	1/2 width of basin (y direction, in feet)
0.28	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

10.778	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
0.778	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
0.778	0
0.778	15
0.389	30
0.000	45
0.000	60
0.000	75
0.000	90
0.000	105
0.000	120
0.000	135

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#4

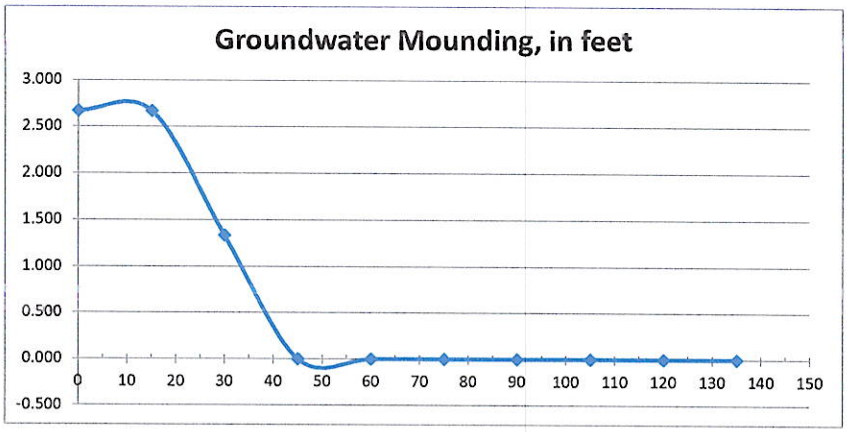
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.05	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
101.640	y	1/2 width of basin (y direction, in feet)
1.20	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

12.667	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
2.667	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
2.667	0
2.667	15
1.334	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



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#5

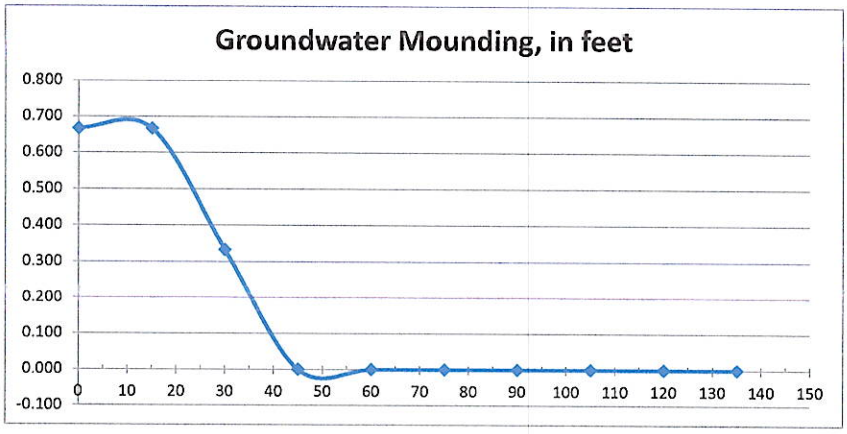
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.10	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
123.420	y	1/2 width of basin (y direction, in feet)
0.30	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

10.667	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
0.667	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
0.667	0
0.667	15
0.333	30
0.000	45
0.000	60
0.000	75
0.000	90
0.000	105
0.000	120
0.000	135

Re-Calculate Now



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#4

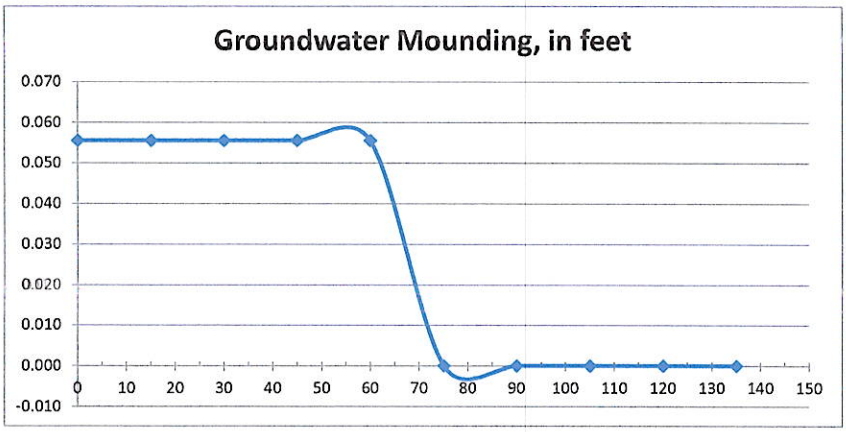
Input Values

10.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.03	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
65.000	x	1/2 length of basin (x direction, in feet)
137.000	y	1/2 width of basin (y direction, in feet)
0.01	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

10.056	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
0.056	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
0.056	0
0.056	15
0.056	30
0.056	45
0.056	60
0.000	75
0.000	90
0.000	105
0.000	120
0.000	135

Re-Calculate Now



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#7

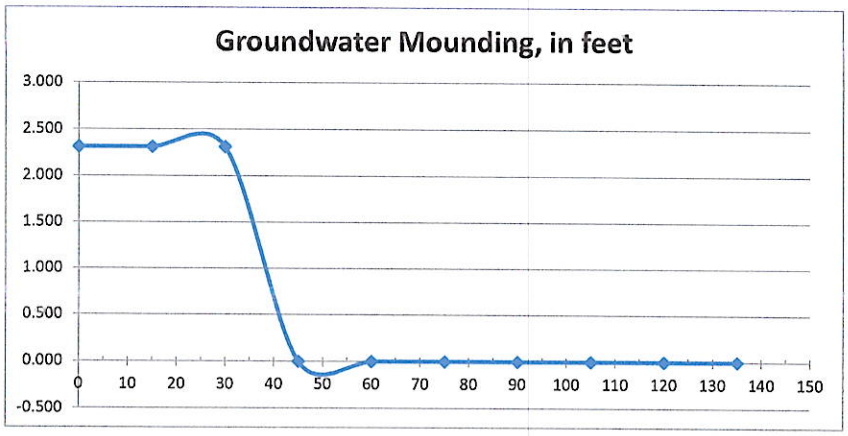
Input Values

4.00	*R*	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.37	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
38.000	x	1/2 length of basin (x direction, in feet)
94.500	y	1/2 width of basin (y direction, in feet)
1.04	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

12.311	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
2.311	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
2.311	0
2.311	15
2.311	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



Disclaimer

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#8

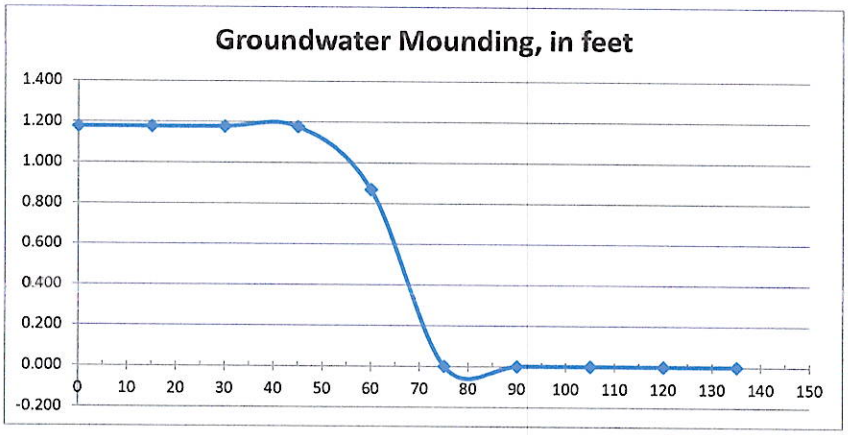
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.07	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
60.250	x	1/2 length of basin (x direction, in feet)
41.500	y	1/2 width of basin (y direction, in feet)
0.53	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

11.178	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.178	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.178	0
1.178	15
1.178	30
1.178	45
0.870	60
0.000	75
0.000	90
0.000	105
0.000	120
0.000	135

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#9

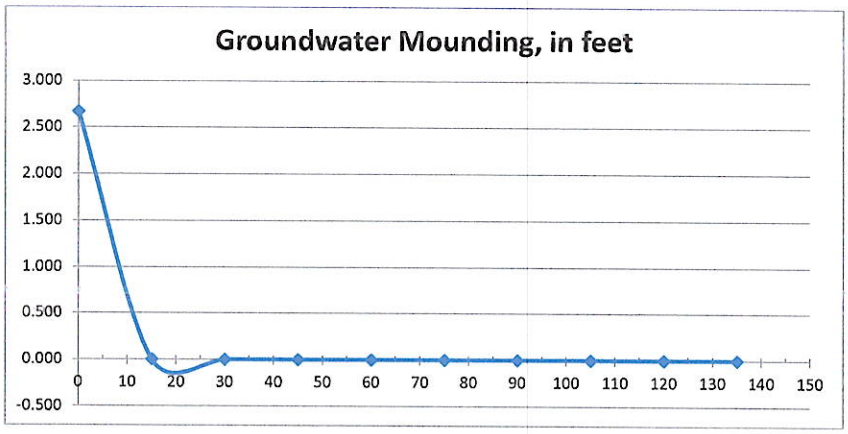
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.10	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
12.000	x	1/2 length of basin (x direction, in feet)
136.000	y	1/2 width of basin (y direction, in feet)
1.20	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

12.667	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
2.667	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
2.667	0
0.003	15
0.001	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

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#10

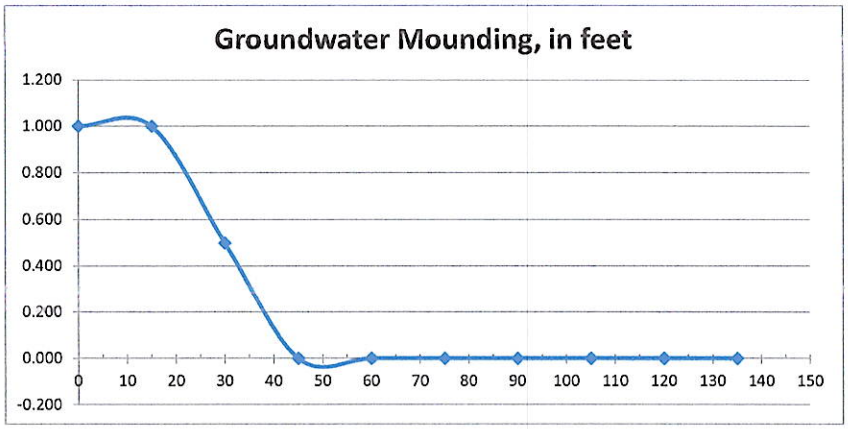
Input Values

4.00	*R*	Recharge rate (permeability rate) (in/hr)
		Specific yield, Sy (dimensionless)
0.150	Sy	default value is 0.15; max value is 0.2 provided that a lab test data is submitted
		Horizontal hydraulic conductivity (in/hr)
0.23	Kh	Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
79.860	y	1/2 width of basin (y direction, in feet)
0.45	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

11.000	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.000	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.000	0
1.000	15
0.500	30
0.000	45
0.000	60
0.000	75
0.000	90
0.000	105
0.000	120
0.000	135

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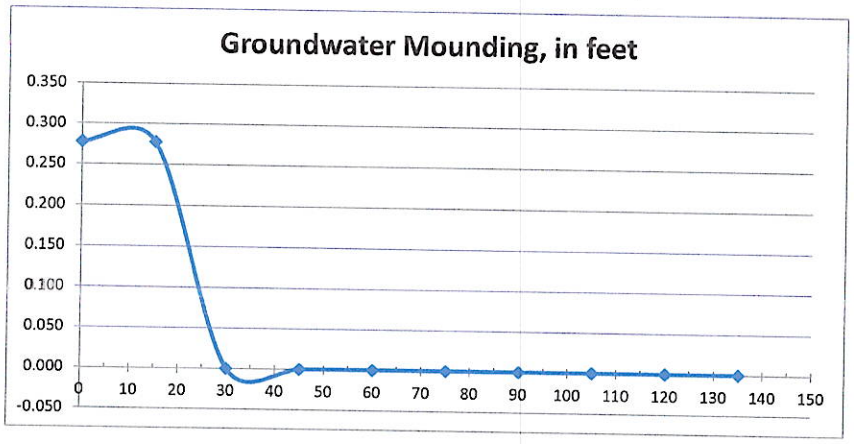
Input Values

10.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.25	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
22.500	x	1/2 length of basin (x direction, in feet)
150.000	y	1/2 width of basin (y direction, in feet)
0.05	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

10.278	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
0.278	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
0.278	0
0.278	15
0.000	30
0.000	45
0.000	60
0.000	75
0.000	90
0.000	105
0.000	120
0.000	135

Re-Calculate Now



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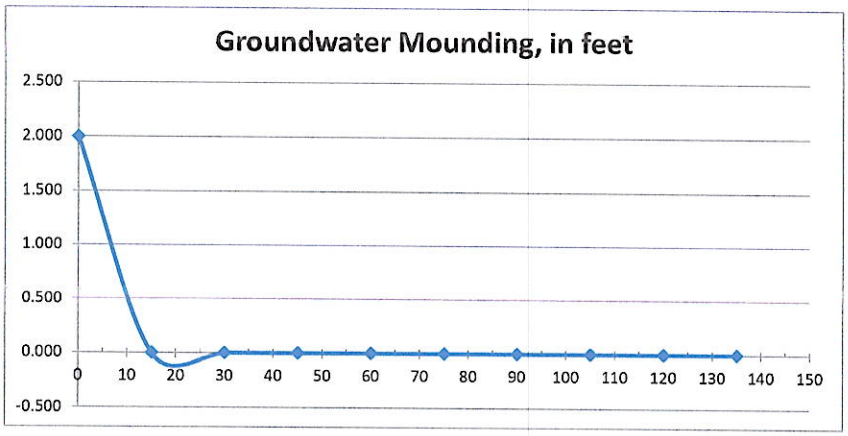
#12

Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.31	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
8.000	x	1/2 length of basin (x direction, in feet)
68.000	y	1/2 width of basin (y direction, in feet)
0.90	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)
12.000	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
2.000	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
2.000	0
0.001	15
0.001	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



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100 YR #3

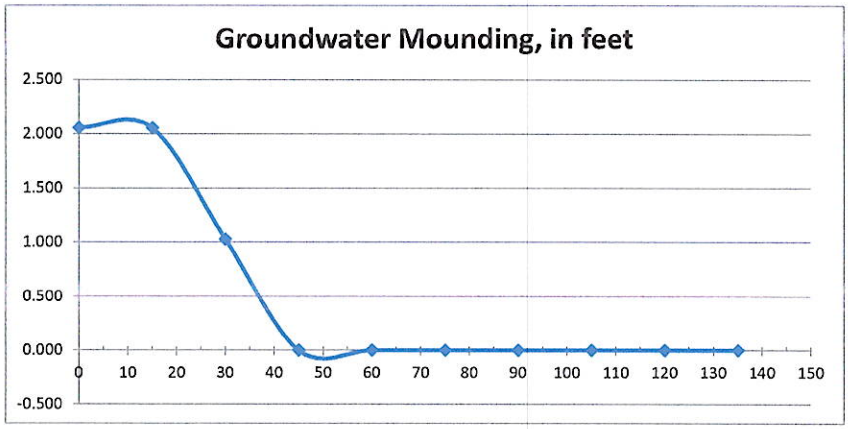
Input Values

10.00	R	Recharge rate (permeability rate) (in/hr)
		Specific yield, Sy (dimensionless)
0.150	Sy	default value is 0.15; max value is 0.2 provided that a lab test data is submitted
		Horizontal hydraulic conductivity (in/hr)
0.28	Kh	Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
43.560	y	1/2 width of basin (y direction, in feet)
0.37	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

12.056	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
2.056	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
2.056	0
2.056	15
1.028	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



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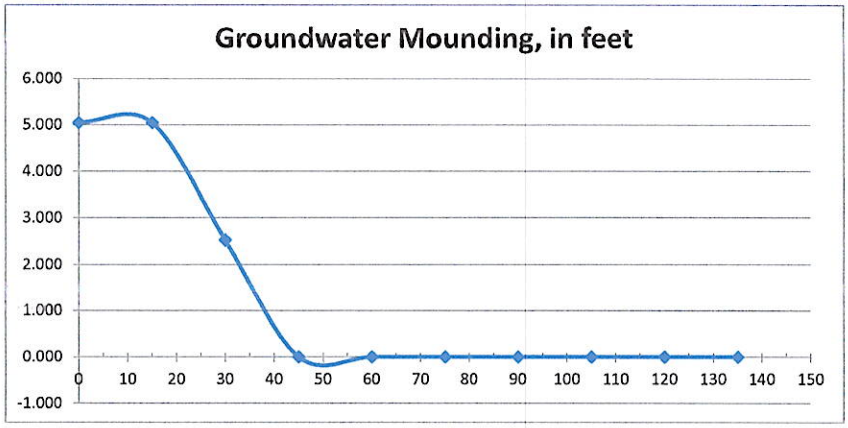
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.05	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
101.640	y	1/2 width of basin (y direction, in feet)
2.27	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

15.044	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
5.044	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
5.044	0
5.044	15
2.523	30
0.002	45
0.002	60
0.002	75
0.002	90
0.002	105
0.002	120
0.002	135

Re-Calculate Now



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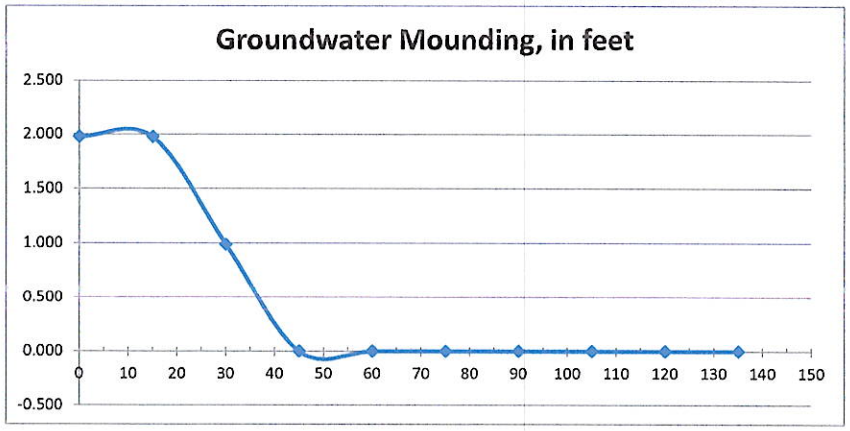
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.10	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
123.420	y	1/2 width of basin (y direction, in feet)
0.89	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

11.978	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.978	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.978	0
1.978	15
0.989	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

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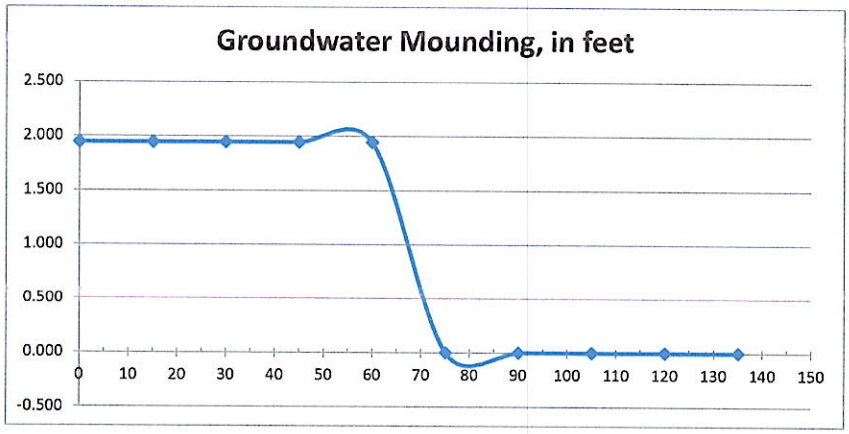
#6

Input Values

10.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.03	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
65.000	x	1/2 length of basin (x direction, in feet)
137.000	y	1/2 width of basin (y direction, in feet)
0.35	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)
11.944	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.944	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.944	0
1.944	15
1.944	30
1.944	45
1.944	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

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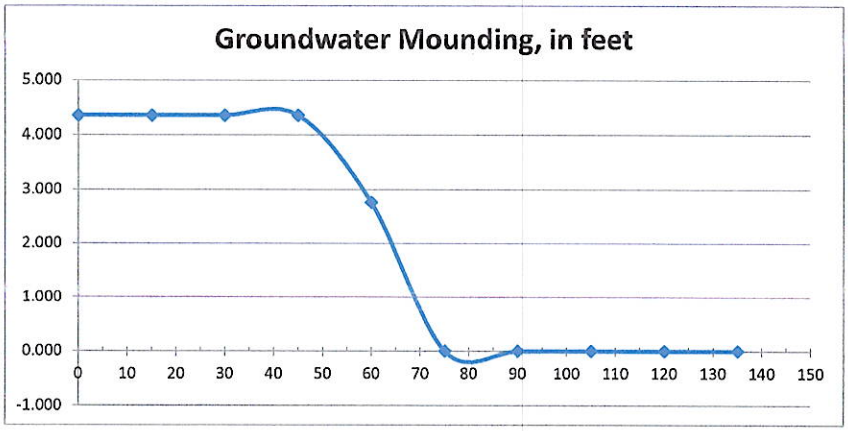
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.07	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
60.250	x	1/2 length of basin (x direction, in feet)
41.500	y	1/2 width of basin (y direction, in feet)
1.96	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

14.356	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
4.356	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
4.356	0
4.356	15
4.356	30
4.356	45
2.763	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

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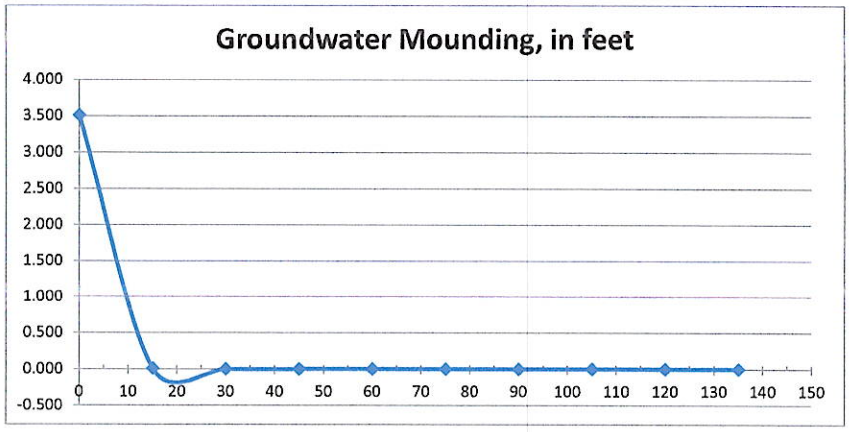
Input Values

4.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.10	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
12.000	x	1/2 length of basin (x direction, in feet)
136.000	y	1/2 width of basin (y direction, in feet)
1.58	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

13.511	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
3.511	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
3.511	0
0.010	15
0.001	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



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#10

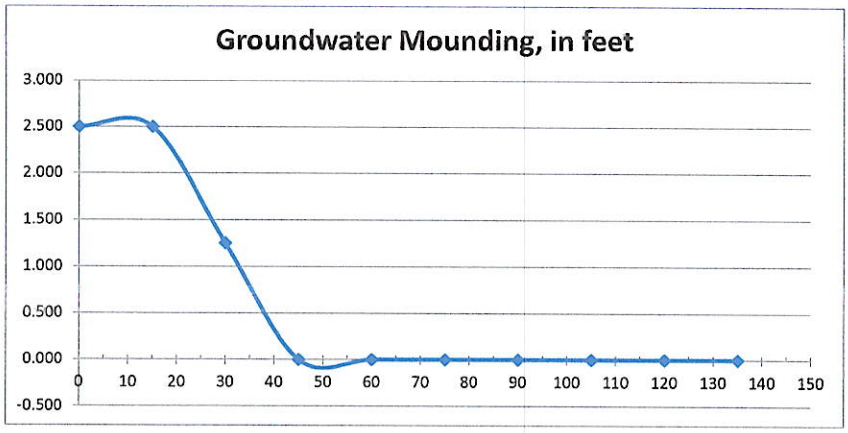
Input Values

10.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.23	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
30.000	x	1/2 length of basin (x direction, in feet)
79.860	y	1/2 width of basin (y direction, in feet)
0.45	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

12.500	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
2.500	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
2.500	0
2.500	15
1.250	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



Disclaimer

This spreadsheet solving the Hantush (1967) equation for ground-water mounding beneath an infiltration basin is made available to the general public as a convenience for those wishing to replicate values documented in the USGS Scientific Investigations Report 2010-5102 "Groundwater mounding beneath hypothetical stormwater infiltration basins" or to calculate values based on user-specified site conditions. Any changes made to the spreadsheet (other than values identified as user-specified) after transmission from the USGS could have unintended, undesirable consequences. These consequences could include, but may not be limited to: erroneous output, numerical instabilities, and violations of underlying assumptions that are inherent in results presented in the accompanying USGS published report. The USGS assumes no responsibility for the consequences of any changes made to the spreadsheet. If changes are made to the spreadsheet, the user is responsible for documenting the changes and justifying the results and conclusions.

#10

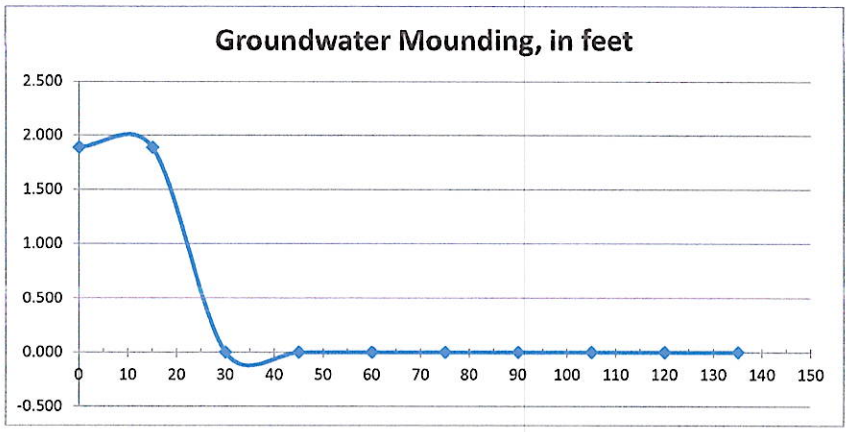
Input Values

10.00	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.25	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
22.500	x	1/2 length of basin (x direction, in feet)
150.000	y	1/2 width of basin (y direction, in feet)
0.34	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

11.889	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.889	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.889	0
1.889	15
0.001	30
0.001	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



Disclaimer

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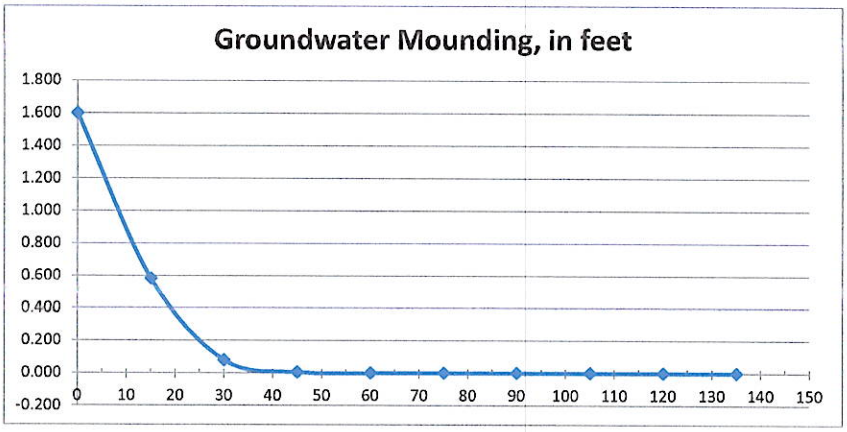
Input Values

0.07	R	Recharge rate (permeability rate) (in/hr)
0.150	Sy	Specific yield, Sy (dimensionless) default value is 0.15; max value is 0.2 provided that a lab test data is submitted
0.31	Kh	Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the costal plan; Kh=R outside the coastal plan
8.000	x	1/2 length of basin (x direction, in feet)
68.000	y	1/2 width of basin (y direction, in feet)
72.00	t	Duration of infiltration period (hours)
10.00	hi(0)	Initial thickness of saturated zone (feet)

11.601	h(max)	Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)
1.601	Δh(max)	Maximum groundwater mounding (beneath center of basin at end of infiltration period)

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.601	0
0.585	15
0.080	30
0.006	45
0.001	60
0.001	75
0.001	90
0.001	105
0.001	120
0.001	135

Re-Calculate Now



Disclaimer

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Recharge Summary

Basin 1		119,805 LARGE SCALE
Basin 2	96,727	
Basin 3	30,461	
Basin 4	110,323	
Basin 5	78,640	
Basin 6	14,828	
Basin 7	137,867	
Basin 8	76,936	
Basin 9	49,877	
Basin 10	86,845	
Basin 11	40,659	
Basin 12	8,305	
Total	731,468	
Deficiet	629,658	

New Jersey Groundwater Recharge Spreadsheet Version 2.0 November 2003

Annual Groundwater Recharge Analysis (based on GSR-32)

Select Township ↓	Average Annual P (in)	Climatic Factor
ESSEX CO., WEST ORANGE TOWN	49.0	1.67

Project Name:	West Essex highlands
Description:	West Orange, Essex County
Analysis Date:	05/31/24

Pre-Developed Conditions

Land Segment	Area (acres)	TR-55 Land Cover	Soil	Annual Recharge (in)	Annual Recharge (cu.ft)
1	0.66	Open space	Adrian	0.0	-
2	8.89	Woods	Adrian	0.0	-
3	0.16	Woods	Hasbrouck	0.0	-
4	0.02	Open space	Haledon	14.7	1,070
5	1.62	Woods	Haledon	15.5	90,995
6	0.81	Open space	Boonton	14.9	43,952
7	16.88	Woods	Boonton	15.7	959,416
8	0				
9	0				
10	0				
11	0				
12	0				
13	0				
14	0				
15	0				
Total =	29.0			Total Annual Recharge (in)	Total Annual Recharge (cu-ft)
				10.4	1,095,433

Post-Developed Conditions

Land Segment	Area (acres)	TR-55 Land Cover	Soil	Annual Recharge (in)	Annual Recharge (cu.ft)
1	6.27	Open space	Adrian	0.0	-
2	3.28	Impervious areas	Adrian	0.0	-
3	0.08	Open space	Hasbrouck	0.0	-
4	0.08	Impervious areas	Hasbrouck	0.0	-
5	1.14	Open space	Haledon	14.7	60,987
6	0.5	Impervious areas	Haledon	0.0	-
7	7.02	Open space	Boonton	14.9	380,916
8	0.42	Woods	Boonton	15.7	23,872
9	10.25	Impervious areas	Boonton	0.0	-
10	0				
11	0				
12	0				
13	0				
14	0				
15	0				
Total =	29.0			Total Annual Recharge (in)	Total Annual Recharge (cu.ft)
				4.4	465,775

Annual Recharge Requirements Calculation ↓

% of Pre-Developed Annual Recharge to Preserve =	100%	Total Impervious Area (sq.ft)
		614,632
Post-Development Annual Recharge Deficit=	***629,658***	(cubic feet)

Recharge Efficiency Parameters Calculations (area averages)

RWC=	2.37	(in)	DRWC= 0.00	(in)
ERWC =	0.39	(in)	EDRWC= 0.00	(in)

Procedure to fill the Pre-Development and Post-Development Conditions Tables

For each land segment, first enter the area, then select TR-55 Land Cover, then select Soil. Start from the top of the table and proceed downward. Don't leave blank rows (with A=0) in between your segment entries. Rows with A=0 will not be displayed or used in calculations. For impervious areas outside of standard lots select "Impervious Areas" as the Land Cover. Soil type for impervious areas are only required if an infiltration facility will be built within these areas.

Project Name	Description	Analysis Date	BMP or LID Type
West Essex highlands	West Orange, Essex County	05/31/24	Aboveground Basin 1

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	39640.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	3.0	in
Upper level of the BMP surface (negative if above ground)	dBMPu	39.0	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	42.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	3.05	in
Inches of Rainfall to capture	Pdesign	3.28	in
Recharge Provided Avg. over Imp. Area		38.5	in
Runoff Captured Avg. over imp. Area		38.5	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	1.06	unitless
BMP Volume	VBMP	9,910	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	37,372	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		119,805	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		100.0%	%
%Runoff Recharged		6.1%	%
%Rainfall Recharged		4.8%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensetive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses.

How to solve for different recharge volumes: By default the spreadsheet assigns the values of total deficit recharge volume "Vdef" and total proposed impervious area "Aimp" from the "Annual Recharge" sheet to "Vdef" and "Aimp" on this page. This allows solution for a single BMP to handle the entire recharge requirement assuming the runoff from entire impervious area is available to the BMP.
To solve for a smaller BMP or a LID-IMP to recharge only part of the recharge requirement, set Vdef to your target value and Aimp to impervious area directly connected to your infiltration facility and then solve for ABMP or dBMP. To go back to the default configuration clik the "Default Vdef & Aimp" button.

Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Aboveground Basin 2

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	32234.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	4.2	in
Upper level of the BMP surface (negative if above ground)	dBMPu	37.8	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	42.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	3.05	in
Inches of Rainfall to capture	Pdesign	3.28	in
Recharge Provided Avg. over Imp. Area		38.5	in
Runoff Captured Avg. over imp. Area		38.5	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	1.07	unitless
BMP Volume	VBMP	11,282	cu.ft

Parameters from Annual Recharge Worksheet

Parameter	Symbol	Value	Unit
Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	30,173	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		96,727	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		100.0%	%
%Runoff Recharged		4.9%	%
%Rainfall Recharged		3.9%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensetive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses.

How to solve for different recharge volumes: By default the spreadsheet assigns the values of total deficit recharge volume "Vdef" and total proposed impervious area "Aimp" from the "Annual Recharge" sheet to "Vdef" and "Aimp" on this page. This allows solution for a single BMP to handle the entire recharge requirement assuming the runoff from entire impervious area is available to the BMP.
To solve for a smaller BMP or a LID-IMP to recharge only part of the recharge requirement, set Vdef to your target value and Aimp to impervious area directly connected to your infiltration facility and then solve for ABMP or dBMP. To go back to the default configuration clik the "Default Vdef & Aimp" button.

Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 3

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	5230.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	1.0	in
Upper level of the BMP surface (negative if above ground)	dBMPu	33.4	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	36.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	0.17	in
Inches of Rainfall to capture	Pdesign	0.23	in
Recharge Provided Avg. over Imp. Area		11.2	in
Runoff Captured Avg. over imp. Area		11.2	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.16	unitless
BMP Volume	VBMP	436	cu.ft

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	32,700	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		30,461	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		29.1%	%
%Runoff Recharged		1.5%	%
%Rainfall Recharged		1.2%	%

OTHER NOTES

Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensetive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses.

How to solve for different recharge volumes: By default the spreadsheet assigns the values of total deficit recharge volume "Vdef" and total proposed impervious area "Aimp" from the "Annual Recharge" sheet to "Vdef" and "Aimp" on this page. This allows solution for a single BMP to handle the entire recharge requirement assuming the runoff from entire impervious area is available to the BMP.
To solve for a smaller BMP or a LID-IMP to recharge only part of the recharge requirement, set Vdef to your target value and Aimp to impervious area directly connected to your infiltration facility and then solve for ABMP or dBMP. To go back to the default configuration clik the "Default Vdef & Aimp" button.

Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 4

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	12200.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	2.4	in
Upper level of the BMP surface (negative if above ground)	dBMPu	42.0	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	48.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	0.60	in
Inches of Rainfall to capture	Pdesign	0.74	in
Recharge Provided Avg. over Imp. Area		26.5	in
Runoff Captured Avg. over imp. Area		26.5	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.24	unitless
BMP Volume	VBMP	2,440	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	50,000	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		110,323	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		68.8%	%
%Runoff Recharged		5.6%	%
%Rainfall Recharged		4.4%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensetive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses.

How to solve for different recharge volumes: By default the spreadsheet assigns the values of total deficit recharge volume "Vdef" and total proposed impervious area "Aimp" from the "Annual Recharge" sheet to "Vdef" and "Aimp" on this page. This allows solution for a single BMP to handle the entire recharge requirement assuming the runoff from entire impervious area is available to the BMP.
To solve for a smaller BMP or a LID-IMP to recharge only part of the recharge requirement, set Vdef to your target value and Aimp to impervious area directly connected to your infiltration facility and then solve for ABMP or dBMP. To go back to the default configuration clik the "Default Vdef & Aimp" button.

Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 5

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	14800.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	1.2	in
Upper level of the BMP surface (negative if above ground)	dBMPu	69.0	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	72.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	0.41	in
Inches of Rainfall to capture	Pdesign	0.53	in
Recharge Provided Avg. over Imp. Area		21.8	in
Runoff Captured Avg. over imp. Area		21.8	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.34	unitless
BMP Volume	VBMP	1,480	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	43,200	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		78,640	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		56.8%	%
%Runoff Recharged		4.0%	%
%Rainfall Recharged		3.1%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensetive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses.

How to solve for different recharge volumes: By default the spreadsheet assigns the values of total deficit recharge volume "Vdef" and total proposed impervious area "Aimp" from the "Annual Recharge" sheet to "Vdef" and "Aimp" on this page. This allows solution for a single BMP to handle the entire recharge requirement assuming the runoff from entire impervious area is available to the BMP.
To solve for a smaller BMP or a LID-IMP to recharge only part of the recharge requirement, set Vdef to your target value and Aimp to impervious area directly connected to your infiltration facility and then solve for ABMP or dBMP. To go back to the default configuration clik the "Default Vdef & Aimp" button.

Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 6

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	35700.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	0.1	in
Upper level of the BMP surface (negative if above ground)	dBMPu	23.8	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	24.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.05	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.04	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	0.05	in
Inches of Rainfall to capture	Pdesign	0.10	in
Recharge Provided Avg. over Imp. Area		1.6	in
Runoff Captured Avg. over imp. Area		2.5	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.31	unitless
BMP Volume	VBMP	298	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	113,900	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.29	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		14,828	cu.ft
Avg BMP Recharge Efficiency		63.1%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		6.4%	%
%Runoff Recharged		0.8%	%
%Rainfall Recharged		0.6%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensetive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses.

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To solve for a smaller BMP or a LID-IMP to recharge only part of the recharge requirement, set Vdef to your target value and Aimp to impervious area directly connected to your infiltration facility and then solve for ABMP or dBMP. To go back to the default configuration clik the "Default Vdef & Aimp" button.

Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Aboveground Basin 7

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	14400.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	4.6	in
Upper level of the BMP surface (negative if above ground)	dBMPu	31.4	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	36.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	1.44	in
Inches of Rainfall to capture	Pdesign	1.67	in
Recharge Provided Avg. over Imp. Area		35.4	in
Runoff Captured Avg. over imp. Area		35.4	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.31	unitless
BMP Volume	VBMP	5,472	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	46,800	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		137,867	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		91.9%	%
%Runoff Recharged		7.0%	%
%Rainfall Recharged		5.5%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

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Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 8

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	10000.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	2.2	in
Upper level of the BMP surface (negative if above ground)	dBMPu	42.6	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	48.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	0.70	in
Inches of Rainfall to capture	Pdesign	0.85	in
Recharge Provided Avg. over Imp. Area		28.2	in
Runoff Captured Avg. over imp. Area		28.2	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.31	unitless
BMP Volume	VBMP	1,833	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	32,700	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		76,936	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		73.4%	%
%Runoff Recharged		3.9%	%
%Rainfall Recharged		3.1%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensetive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses.

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Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 9

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	6500.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	4.8	in
Upper level of the BMP surface (negative if above ground)	dBMPu	24.0	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	36.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	2.19	in
Inches of Rainfall to capture	Pdesign	2.42	in
Recharge Provided Avg. over Imp. Area		37.1	in
Runoff Captured Avg. over imp. Area		37.1	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.40	unitless
BMP Volume	VBMP	2,600	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	16,133	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		49,877	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		96.4%	%
%Runoff Recharged		2.5%	%
%Rainfall Recharged		2.0%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

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Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Aboveground Basin 10

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	9600.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	1.8	in
Upper level of the BMP surface (negative if above ground)	dBMPu	34.2	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	36.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	0.30	in
Inches of Rainfall to capture	Pdesign	0.39	in
Recharge Provided Avg. over Imp. Area		17.4	in
Runoff Captured Avg. over imp. Area		17.4	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.16	unitless
BMP Volume	VBMP	1,440	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	60,000	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		86,845	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		45.2%	%
%Runoff Recharged		4.4%	%
%Rainfall Recharged		3.5%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

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Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 11

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	13500.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	0.5	in
Upper level of the BMP surface (negative if above ground)	dBMPu	34.8	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	36.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	0.10	in
Inches of Rainfall to capture	Pdesign	0.16	in
Recharge Provided Avg. over Imp. Area		7.5	in
Runoff Captured Avg. over imp. Area		7.5	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.21	unitless
BMP Volume	VBMP	540	cu.ft

Parameters from Annual Recharge Worksheet

Post-D Deficit Recharge (or desired recharge volume)	Vdef	621,132	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	65,200	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.1	in

System Performance Calculated Parameters

Annual BMP Recharge Volume		40,659	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		19.5%	%
%Runoff Recharged		2.1%	%
%Rainfall Recharged		1.6%	%

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

OTHER NOTES

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Project Name	Description	Analysis Date	BMP or LID Type
West Essex Highlands	West Orange, Essex County	05/31/24	Pervious Pavement 12

Recharge BMP Input Parameters

Parameter	Symbol	Value	Unit
BMP Area	ABMP	2100.0	sq.ft
BMP Effective Depth, this is the design variable	dBMP	3.6	in
Upper level of the BMP surface (negative if above ground)	dBMPu	27.0	in
Depth of lower surface of BMP, must be>=dBMPu	dEXC	48.0	in
Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined	SegBMP	0	unitless

Root Zone Water capacity Calculated Parameters

Parameter	Symbol	Value	Unit
Empty Portion of RWC under Post-D Natural Recharge	ERWC	0.39	in
ERWC Modified to consider dEXC	EDRWC	0.00	in
Empty Portion of RWC under Infilt. BMP	RERWC	0.00	in

Recharge Design Parameters

Parameter	Symbol	Value	Unit
Inches of Runoff to capture	Qdesign	3.05	in
Inches of Rainfall to capture	Pdesign	3.28	in
Recharge Provided Avg. over Imp. Area		38.3	in
Runoff Captured Avg. over imp. Area		38.3	in

BMP Calculated Size Parameters

ABMP/Aimp	Aratio	0.81	unitless
BMP Volume	VBMP	630	cu.ft

CALCULATION CHECK MESSAGES

Volume Balance-> Solve Problem to satisfy Annual Recharge
dBMP Check---> OK
dEXC Check---> OK

BMP Location---> Location is selected as distributed or undetermined

Parameters from Annual Recharge Worksheet

Parameter	Symbol	Value	Unit
Post-D Deficit Recharge (or desired recharge volume)	Vdef	629,658	cu.ft
Post-D Impervious Area (or target Impervious Area)	Aimp	2,600	sq.ft
Root Zone Water Capacity	RWC	2.37	in
RWC Modified to consider dEXC	DRWC	0.00	in
Climatic Factor	C-factor	1.67	no units
Average Annual P	Pavg	49.0	in
Recharge Requirement over Imp. Area	dr	12.3	in

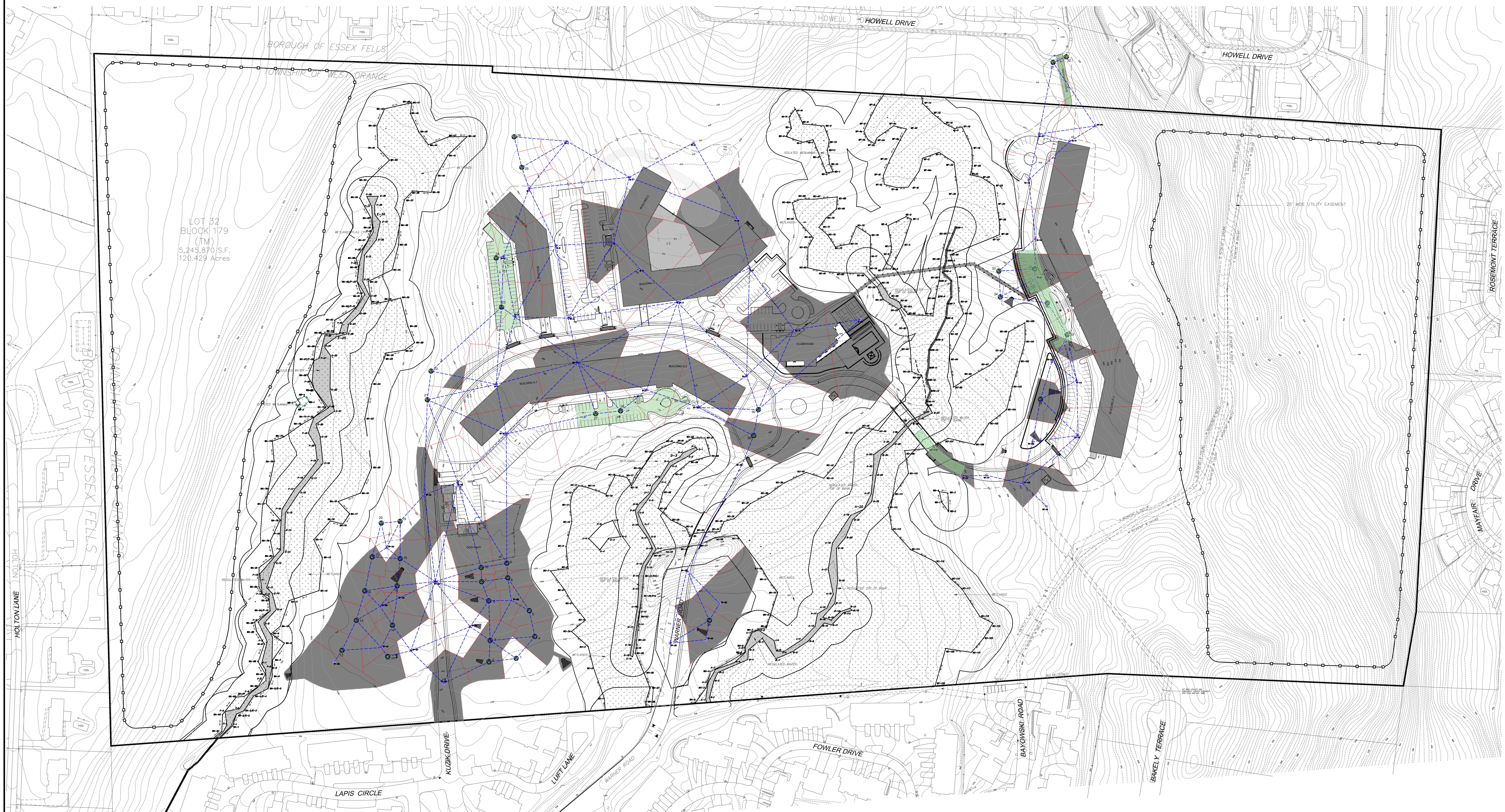
System Performance Calculated Parameters

Annual BMP Recharge Volume		8,305	cu.ft
Avg BMP Recharge Efficiency		100.0%	Represents % Infiltration Recharged
%Rainfall became Runoff		78.5%	%
%Runoff Infiltrated		99.6%	%
%Runoff Recharged		0.4%	%
%Rainfall Recharged		0.3%	%

OTHER NOTES

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HSG-D SOIL AREA = 421,633 SF
9.68 AC

TP-#
PREVIOUSLY PERFORMED TEST PIT LOCATION

B-#
PREVIOUSLY PERFORMED SOIL BORING LOCATION

- NEW SOIL PERMEABILITY AND SEASONAL HIGH GROUNDWATER TESTING LOCATION

STEWART SURVEY

GRAPHIC SCALE

120 0 60 120 240 480

(IN FEET)
1 inch = 120 ft.

NEW JERSEY STATE LAW REQUIRES NOTIFICATION 3 BUSINESS DAYS PRIOR TO ANY LAND DISTURBANCE. CONTRACTOR IS RESPONSIBLE FOR CALLING 811 OR 1-800-272-1000 FOR UTILITY MARKOUTS. UTILITY INFORMATION SHOWN IS PROVIDED BY THE SURVEYOR AND IS CURRENT AT THE TIME OF THE SURVEY. ANDERSON CONSULTING SERVICES IS NOT RESPONSIBLE FOR THE ACCURACY OF THE DATA.

811 Know what's below. Call before you dig.

MAP REFERENCE:

1. TOPOGRAPHIC INFORMATION BASED ON SURVEY ENTITLED "TOPOGRAPHIC SURVEY OF PROPERTY" TAX LOTS 1, 2.04, & 3 – BLOCK 161 TAX LOT 3.01 – BLOCK 161, 1701–1711 ROUTE 10, TOWNSHIP OF MORRIS PLAINS, MORRIS COUNTY, NEW JERSEY" DATED 1/15/16 AND LAST REVISED 1–20–20 PREPARED BY LAKELAND SURVEYING, ROCKAWAY NJ. SIGNED BY MARC J. CIFONE, PLS
2. VERTICAL DATUM IS NAVD 1988
3. NGVD29 TO NGVD1988 = + 1.03 FT
4. FRESHWATERS WETLANDS/BOUNDARY LINE AS VERIFIED BY NJDEP FILE No. 1423–07–0001.1, FWWW190001

PAUL W. ANDERSON
N.J. PROFESSIONAL ENGINEER
LIC. No. 33410
SIGNATURE INVALID WITHOUT RAISED SEAL OF P.E.

10/26/23	PER NJDEP COMMENTS
10/23/23	PER NJDEP COMMENTS
10/03/23	PER NJDEP COMMENTS
9/07/23	PER NJDEP COMMENTS
7/11/23	PER NJDEP WETLANDS COMMENTS
6/07/23	PER NJDEP COMMENTS
Revisions	

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24GA28182400

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www.pwanderson-cs.com

Proj. No.	WEMF2022
Date	9–23–22
Drawn by	BCA
Designed by	PWA
Checked by	PWA
Scale	AS SHOWN

PRELIMINARY AND FINAL SITE PLAN
WEST ESSEX HIGHLANDS
BLOCK 179 LOT 32
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

OVERALL SOIL TESTING PLAN

OA

SHEET OF 66

Stormwater Collection System Calculations

Project: WEH
County: Essex County
Municipality: West Orange
Design Storm: 25 yr storm

Computed By: ASM
Checked By: PWA
Date: 6/26/2024
Revised:

NOTES:
1) Design method used is Rational Method
2) Refer to Weighted Runoff Coefficient table for calculation of incremental areas and C values

PIPE SECTION		SUBCATCHMENT AREA	INCREMENTAL		CUMULATIVE	TIME OF CONCENTRATION			I	PEAK RUNOFF		PIPING INPUT			PIPING DATA			
FROM	TO	Area (Acres)	"C"	A x C Ac	A x C (acres)	Tc to Inlet (min)	Tc in Pipe (min.)	Final Tc (min)	(In/Hr)	Q to Inlet (CFS)	Q cum. for Pipe (CFS)	Dia. (In)	Length (Ft)	Man. "n"	Slope (ft/ft)	Pipe Capacity (cfs)	Full Pipe Velocity (fps)	Actual Pipe Velocity (fps)
K-14.1	K-14	0.15	0.91	0.14	0.14	10.00	0.04	10.00	6.80	0.95	0.95	15	31.0	0.010	0.0289	14.27	11.63	3.72
K-14	K-13	0.05	0.89	0.04	0.18	10.00	0.05	10.04	6.80	0.27	1.22	15	22.0	0.010	0.0100	8.39	6.84	3.55
K-13	K-MH.12	0.21	0.63	0.13	0.31	10.00	0.28	10.09	6.80	0.88	2.11	15	116.0	0.010	0.0100	8.39	6.84	4.81
K-MH.12	K-MH.11	0.00	0.00	0.00	0.31	10.00	0.50	10.37	6.80	0.00	2.11	15	206.0	0.010	0.0100	8.39	6.84	4.81
K-MH.11	K-9	0.00	0.00	0.00	0.31	10.00	0.28	10.87	6.68	0.00	2.07	15	136.0	0.010	0.0143	10.04	8.19	5.19
K-10	K-9	0.06	0.95	0.06	0.06	10.00	0.05	10.00	6.80	0.41	0.41	15	22.0	0.010	0.0100	8.39	6.84	1.76
K-9	K-MH.8	0.34	0.65	0.22	0.59	10.00	0.11	11.15	6.56	1.44	3.87	15	113.0	0.010	0.0653	21.45	17.49	10.12
K-MH.8	K-6	0.00	0.00	0.00	0.59	10.00	0.13	11.26	6.56	0.00	3.87	15	158.0	0.010	0.0872	24.79	20.21	10.90
K-7.1	K-7	0.48	0.45	0.22	0.22	10.00	0.02	10.00	6.80	1.50	1.50	15	30.0	0.010	0.0903	25.23	20.57	5.96
K-7	K-6	0.07	0.95	0.07	0.29	10.00	0.05	10.02	6.80	0.48	1.97	15	22.0	0.010	0.0100	8.39	6.84	4.58
K-6	K-MH.5	0.20	0.75	0.15	1.03	10.00	0.13	11.39	6.56	0.98	6.76	15	140.0	0.010	0.0675	21.81	17.78	14.08
K-MH.5	K-3	0.00	0.00	0.00	1.03	10.00	0.23	11.52	6.44	0.00	6.63	15	163.0	0.010	0.0295	14.42	11.76	11.36
A-5	A-6	0.32	0.46	0.15	0.15	10.00	0.05	10.00	6.80	1.02	1.02	15	46.0	0.010	0.0486	18.51	15.09	4.38
A-6	A-7	0.03	0.79	0.02	0.17	10.00	0.06	10.05	6.80	0.14	1.16	15	24.0	0.010	0.0102	8.48	6.91	3.43
A-7	K-4	0.03	0.85	0.03	0.20	10.00	0.16	10.11	6.80	0.20	1.36	15	114.0	0.010	0.0305	14.66	11.95	4.49
K-4	K-3	0.14	0.80	0.11	0.31	10.00	0.05	10.27	6.80	0.75	2.11	15	22.0	0.010	0.0100	8.39	6.84	4.81
K-3	BRR-1	0.04	0.84	0.03	1.37	10.00	0.09	11.75	6.44	0.19	8.82	24	106.0	0.010	0.0446	62.09	19.77	9.81
K-2	K-1	0.06	0.95	0.06	0.06	10.00	0.08	10.00	6.80	0.41	0.41	15	22.0	0.010	0.0045	5.63	4.59	1.47
K-1	BRR-2.1	0.06	0.95	0.06	0.12	10.00	0.12	10.08	6.80	0.41	0.82	15	41.0	0.010	0.0067	6.87	5.60	2.53
K-17	K-18	0.12	0.95	0.11	0.11	10.00	0.11	10.00	6.80	0.75	0.75	15	40.0	0.010	0.0074	7.22	5.89	2.37
K-18	EX. INLET	0.12	0.84	0.10	0.21	10.00	0.23	10.11	6.80	0.68	1.43	15	133.0	0.010	0.0200	11.87	9.68	4.36
A-2	A-1	0.07	0.95	0.07	0.07	10.00	0.22	10.00	6.80	0.48	0.48	15	187.0	0.010	0.0439	17.59	14.34	2.64
A-4	A-1	0.42	0.79	0.33	0.33	10.00	0.19	10.00	6.80	2.24	2.24	15	89.0	0.010	0.0137	9.83	8.01	5.36
A-1	A-1.1	0.16	0.95	0.15	0.55	10.00	0.11	10.22	6.80	1.02	3.74	15	46.0	0.010	0.0101	8.44	6.88	6.51
A-1.1	A-MH.1	0.35	0.40	0.14	0.69	10.00	0.05	10.33	6.80	0.95	4.69	15	36.0	0.010	0.0307	14.71	11.99	9.66
A-MH.1	BRR-2.2	0.00	0.00	0.00	0.69	10.00	0.11	10.38	6.80	0.00	4.69	15	133.0	0.010	0.0926	25.54	20.82	12.06
C-5	C-6	0.16	0.40	0.06	0.06	10.00	0.09	10.00	6.80	0.41	0.41	15	83.0	0.010	0.0480	18.39	14.99	2.12
C-6	C-7	0.50	0.40	0.20	0.26	10.00	0.76	10.09	6.80	1.36	1.77	15	221.0	0.010	0.0050	5.94	4.84	3.77
C-7	C-8	0.16	0.40	0.06	0.32	10.00	0.30	10.85	6.68	0.40	2.14	15	91.0	0.010	0.0055	6.23	5.08	4.22
C-8	BPP-6	0.12	0.40	0.05	0.37	10.00	0.68	11.15	6.56	0.33	2.43	15	159.0	0.010	0.0032	4.75	3.87	3.91

PIPE SECTION		SUBCATCHMENT AREA	INCREMENTAL		CUMULATIVE	TIME OF CONCENTRATION			I	PEAK RUNOFF		PIPING INPUT			PIPING DATA			
FROM	TO	Area (Acres)	"C"	A x C Ac	A x C (acres)	Tc to Inlet (min)	Tc in Pipe (min.)	Final Tc (min)	(In/Hr)	Q to Inlet (CFS)	Q cum. for Pipe (CFS)	Dia. (In)	Length (Ft)	Man. "n"	Slope (ft/ft)	Pipe Capacity (cfs)	Full Pipe Velocity (fps)	Actual Pipe Velocity (fps)
C-4	C-2	0.08	0.68	0.05	0.05	10.00	0.10	10.00	6.80	0.34	0.34	15	73.0	0.010	0.0343	15.55	12.68	1.79
C-3	C-2	0.15	0.79	0.12	0.12	10.00	0.09	10.00	6.80	0.82	0.82	15	65.0	0.010	0.0308	14.73	12.01	3.48
C-2	C-1	0.10	0.78	0.08	0.25	10.00	0.14	10.10	6.80	0.54	1.70	15	61.0	0.010	0.0114	8.96	7.30	4.37
C-1	K-15	0.17	0.80	0.14	0.39	10.00	0.06	10.24	6.80	0.95	2.65	15	69.0	0.010	0.0700	22.21	18.11	8.16
K-15	K-16	0.51	0.75	0.38	0.77	10.00	0.04	10.30	6.80	2.58	5.24	15	22.0	0.010	0.0182	11.32	9.23	8.92
K-16	K-MH.17	0.02	0.83	0.02	0.79	10.00	0.12	10.34	6.80	0.14	5.37	15	140.0	0.010	0.0750	22.99	18.74	12.55
K-MH.17	W-6	0.00	0.00	0.00	0.79	10.00	0.22	10.46	6.80	0.00	5.37	15	168.0	0.010	0.0355	15.82	12.90	10.73
W-7	OCS-8	0.21	0.46	0.10	0.10	10.00	0.11	10.00	6.80	0.68	0.68	15	51.0	0.010	0.0119	9.16	7.47	2.39
OCS-8	W-6	0.00	0.00	0.00	0.10	10.00	0.05	10.11	6.80	0.00	0.68	15	45.0	0.010	0.0456	17.93	14.62	3.26
W-6	W-5	0.15	0.53	0.08	0.97	10.00	0.07	10.68	6.68	0.53	6.48	15	81.0	0.010	0.0735	22.76	18.56	13.90
W-5.1	W-5	0.26	0.85	0.22	0.22	10.00	0.05	10.00	6.80	1.50	1.50	15	22.0	0.010	0.0100	8.39	6.84	3.96
W-5	W-4	0.40	0.47	0.19	1.38	10.00	0.12	10.75	6.68	1.27	9.22	15	135.0	0.010	0.0729	22.67	18.48	16.91
W-4.1	W-4	0.05	0.93	0.05	0.05	10.00	0.05	10.00	6.80	0.34	0.34	15	22.0	0.010	0.0108	8.72	7.11	1.59
W-4	W-3	0.04	0.95	0.04	1.47	10.00	0.15	10.87	6.68	0.27	9.82	15	165.0	0.010	0.0732	22.71	18.52	17.34
W-3.1	W-3	0.06	0.95	0.06	0.06	10.00	0.05	10.00	6.80	0.41	0.41	15	22.0	0.010	0.0100	8.39	6.84	1.76
W-3	W-2	0.06	0.85	0.05	1.58	10.00	0.15	11.02	6.56	0.33	10.36	15	153.0	0.010	0.0588	20.36	16.60	16.78
W-2	W-1	0.07	0.77	0.05	1.63	10.00	0.05	11.17	6.56	0.33	10.69	18	22.0	0.010	0.0100	13.65	7.73	8.82
W-1	CS	0.07	0.77	0.05	1.68	10.00	0.06	11.22	6.56	0.33	11.02	24	34.0	0.010	0.0087	27.42	8.73	7.90
CS	BRR-7	0.00	0.00	0.00	1.68	10.00	0.02	11.28	6.56	0.00	11.02	24	12.0	0.010	0.0101	29.55	9.41	8.18
W-8	W-MH.2	0.05	0.78	0.04	0.04	10.00	0.05	10.00	6.80	0.27	0.27	15	17.0	0.010	0.0060	6.50	5.30	1.18
W-9	W-MH.2	0.10	0.66	0.07	0.07	10.00	0.05	10.00	6.80	0.48	0.48	15	17.0	0.010	0.0060	6.50	5.30	1.70
W-MH.2	W-CULVERT	0.00	0.00	0.00	0.11	10.00	0.10	10.05	6.80	0.00	0.75	15	33.0	0.010	0.0061	6.56	5.35	2.28
D-18	D-17/18	0.30	0.84	0.25	0.25	10.00	0.02	10.00	6.80	1.70	1.70	15	11.0	0.010	0.0287	14.22	11.59	5.23
D-17	D-17/18	0.34	0.70	0.24	0.24	10.00	0.02	10.00	6.80	1.63	1.63	15	11.0	0.010	0.0281	14.07	11.47	5.17
D-17/18	BRR-9	0.00	0.00	0.00	0.49	10.00	0.06	10.02	6.80	0.00	3.33	15	26.0	0.010	0.0100	8.39	6.84	6.19
D-1	D-2	0.38	0.64	0.24	0.24	10.00	0.05	10.00	6.80	1.63	1.63	15	23.0	0.010	0.0108	8.72	7.11	4.25
D-2	D-MH.1	0.08	0.73	0.06	0.30	10.00	0.10	10.05	6.80	0.41	2.04	15	34.0	0.010	0.0073	7.17	5.85	4.38
D-MH.1	BRR-10	0.00	0.00	0.00	0.30	10.00	0.12	10.15	6.80	0.00	2.04	15	46.0	0.010	0.0087	7.83	6.38	4.59
D-3	D-4	0.16	0.47	0.08	0.08	10.00	0.11	10.00	6.80	0.54	0.54	15	46.0	0.010	0.0100	8.39	6.84	1.98
D-4	D-5	0.02	0.84	0.02	0.10	10.00	0.15	10.11	6.80	0.14	0.68	15	62.0	0.010	0.0101	8.44	6.88	2.40
D-5	D-6	0.22	0.84	0.18	0.28	10.00	0.14	10.26	6.80	1.22	1.90	15	58.0	0.010	0.0103	8.52	6.95	4.53
D-6	BRR-10.1	0.11	0.95	0.10	0.38	10.00	0.03	10.40	6.80	0.68	2.58	15	12.0	0.010	0.0105	8.60	7.01	5.46
D-7	D-8	0.18	0.68	0.12	0.12	10.00	0.15	10.00	6.80	0.82	0.82	15	60.0	0.010	0.0100	8.39	6.84	2.75
D-8	BRR-10.2	0.08	0.95	0.08	0.20	10.00	0.04	10.15	6.80	0.54	1.36	15	17.0	0.010	0.0116	9.04	7.37	3.82
D-12	D-11	0.03	0.40	0.01	0.01	10.00	0.15	10.00	6.80	0.07	0.07	15	126.0	0.010	0.0436	17.53	14.29	#N/A
D-11	D-10	0.08	0.40	0.03	0.04	10.00	0.14	10.15	6.80	0.20	0.27	15	99.0	0.010	0.0304	14.64	11.94	1.68
D-9	D-10	0.15	0.40	0.06	0.06	10.00	0.26	10.00	6.80	0.41	0.41	15	107.0	0.010	0.0103	8.52	6.95	1.79
D-10	D-MH.7	0.16	0.40	0.06	0.16	10.00	0.16	10.29	6.80	0.41	1.09	15	110.0	0.010	0.0265	13.67	11.14	3.89
D-MH.7	BPP-11	0.00	0.00	0.00	0.16	10.00	0.03	10.45	6.80	0.00	1.09	15	24.0	0.010	0.0532	19.36	15.78	4.58

ANDERSON CONSULTING SERVICES
40 Miller Drive; Boonton, NJ 07005
(973) 975-0703

Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # B-1.1

Design Parameters:

Design Storm Flow for 25 Year, Q	8.82	cfs
Vertical Dimension of Outlet Pipe, D_o	24	in
Horizontal Dimension of Outlet Pipe, W_o	24	in
Tailwater Depth, TW[1]	0.40	ft

Apron Dimension Calculations:

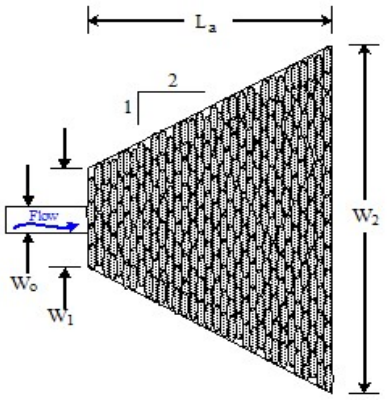
Unit Dicharge, $q = Q/D_o$ = 4.41 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 19.61 ft or **L_a = 20 ft**

Width, $W_1 = 3W_o$ = 6. ft or **W_1 = 6 ft**

Width, $W_2 = 3W_o + L_a$ = 25.61 ft or **W_2 = 26 ft**

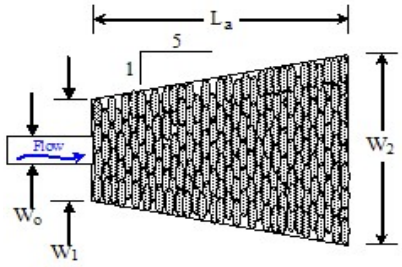


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 4.32 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

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Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # B-1

Design Parameters:

Design Storm Flow for 25 Year, Q	0.73	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

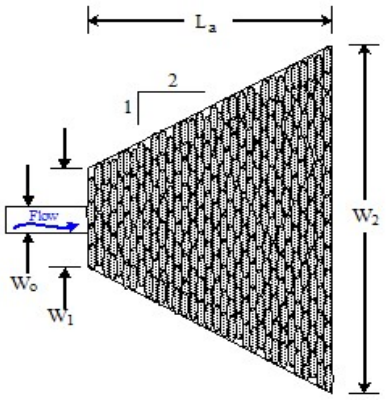
Unit Dicharge, $q = Q/D_o$ = 0.58 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 9.69 ft or L_a = **10 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or W_1 = **4 ft**

Width, $W_2 = 3W_o + L_a$ = 13.44 ft or W_2 = **14 ft**

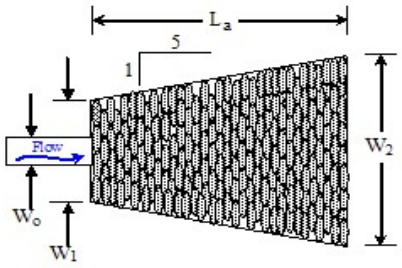


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = L_a =

Width, $W_1 = 3W_o$ = W_1 =

Width, $W_2 = 3W_o + 0.4L_a$ = W_2 =



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 0.47 in d_{50} = **6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

ANDERSON CONSULTING SERVICES
40 Miller Drive; Boonton, NJ 07005
(973) 975-0703

Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # B-2.1

Design Parameters:

Design Storm Flow for 25 Year, Q	0.82	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

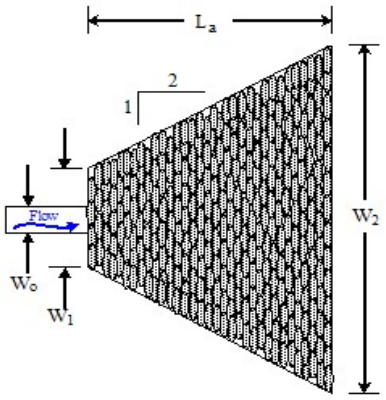
Unit Dicharge, $q = Q/D_o$ = 0.66 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 9.81 ft or **L_a = 10 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or **W_1 = 4 ft**

Width, $W_2 = 3W_o + L_a$ = 13.56 ft or **W_2 = 14 ft**

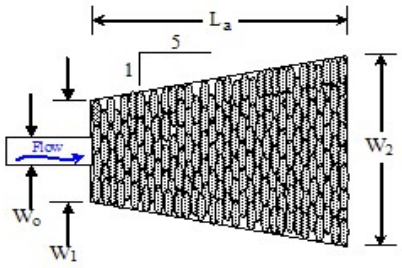


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 0.55 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

ANDERSON CONSULTING SERVICES
40 Miller Drive; Boonton, NJ 07005
(973) 975-0703

Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # B-2.2

Design Parameters:

Design Storm Flow for 25 Year, Q	4.69	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

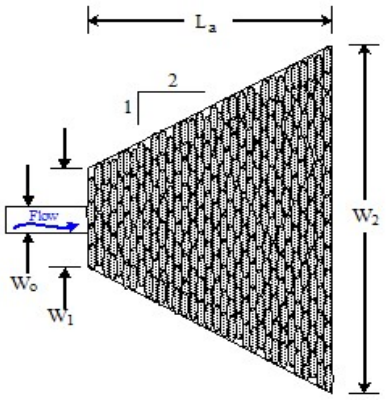
Unit Dicharge, $q = Q/D_o$ = 3.75 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 14.79 ft or **L_a = 15 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or **W_1 = 4 ft**

Width, $W_2 = 3W_o + L_a$ = 18.54 ft or **W_2 = 19 ft**

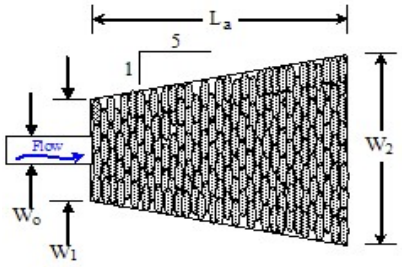


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 5.57 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

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40 Miller Drive; Boonton, NJ 07005
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Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # B-2

Design Parameters:

Design Storm Flow for 25 Year, Q	2.69	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

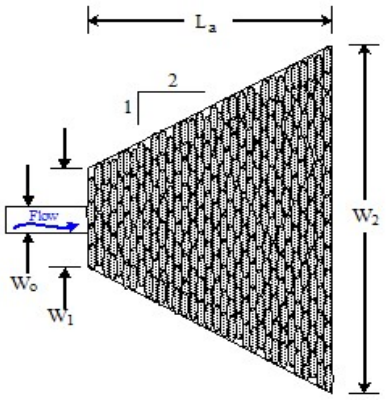
Unit Dicharge, $q = Q/D_o$ = 2.15 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 12.21 ft or **L_a = 13 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or **W_1 = 4 ft**

Width, $W_2 = 3W_o + L_a$ = 15.96 ft or **W_2 = 16 ft**

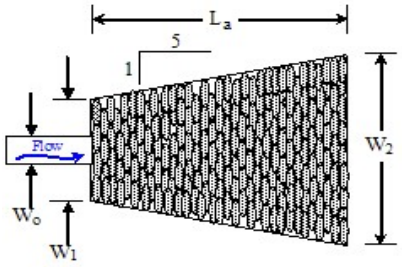


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 2.66 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

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Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
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Conduit Outlet Protection Calculations

Rip Rap Pad # B-7

Design Parameters:

Design Storm Flow for 25 Year, Q	11.02	cfs
Vertical Dimension of Outlet Pipe, D_o	24	in
Horizontal Dimension of Outlet Pipe, W_o	24	in
Tailwater Depth, TW[1]	0.40	ft

Apron Dimension Calculations:

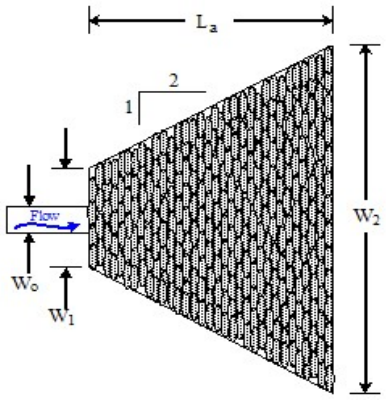
Unit Dicharge, $q = Q/D_o$ = 5.51 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 21.01 ft or **L_a = 22 ft**

Width, $W_1 = 3W_o$ = 6. ft or **W_1 = 6 ft**

Width, $W_2 = 3W_o + L_a$ = 27.01 ft or **W_2 = 28 ft**

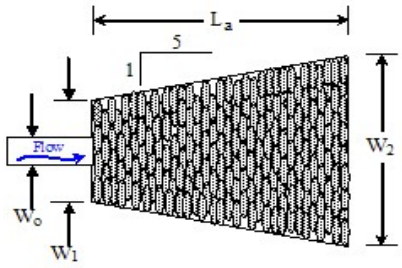


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 5.81 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

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Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
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Conduit Outlet Protection Calculations

Rip Rap Pad # B-10.1

Design Parameters:

Design Storm Flow for 25 Year, Q	2.58	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

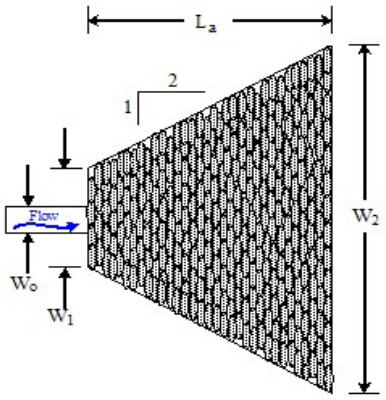
Unit Dicharge, $q = Q/D_o$ = 2.06 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 12.07 ft or L_a = **13 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or W_1 = **4 ft**

Width, $W_2 = 3W_o + L_a$ = 15.82 ft or W_2 = **16 ft**

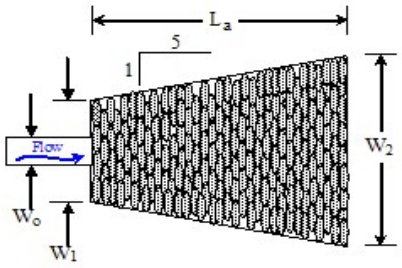


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = L_a =

Width, $W_1 = 3W_o$ = W_1 =

Width, $W_2 = 3W_o + 0.4L_a$ = W_2 =



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 2.52 in d_{50} = **6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

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Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # B-10.2

Design Parameters:

Design Storm Flow for 25 Year, Q	1.36	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

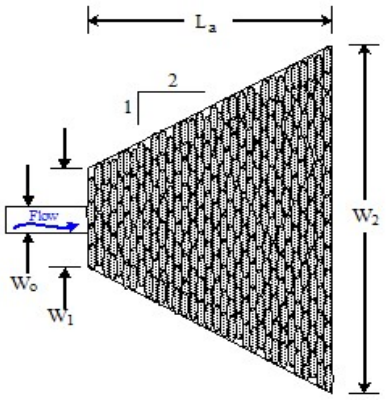
Unit Dicharge, $q = Q/D_o$ = 1.09 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 10.5 ft or **L_a = 11 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or **W_1 = 4 ft**

Width, $W_2 = 3W_o + L_a$ = 14.25 ft or **W_2 = 15 ft**

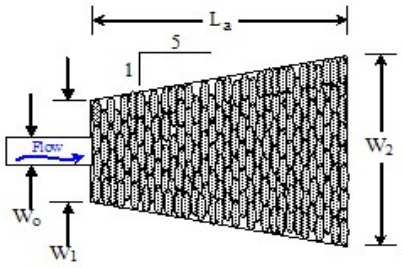


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 1.07 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

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Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # B-10

Design Parameters:

Design Storm Flow for 25 Year, Q	3.31	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

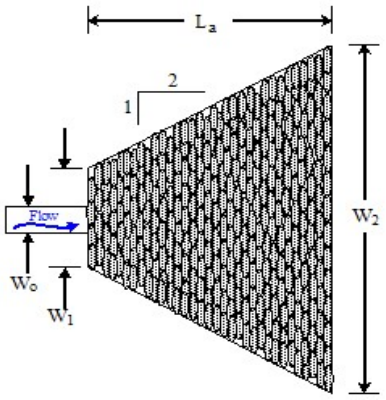
Unit Dicharge, $q = Q/D_o$ = 2.65 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 13.01 ft or **L_a = 14 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or **W_1 = 4 ft**

Width, $W_2 = 3W_o + L_a$ = 16.76 ft or **W_2 = 17 ft**

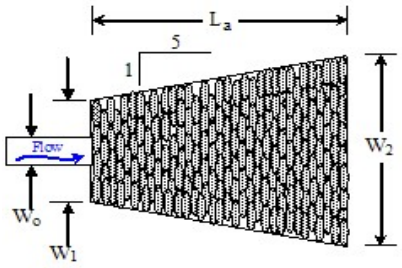


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 3.51 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

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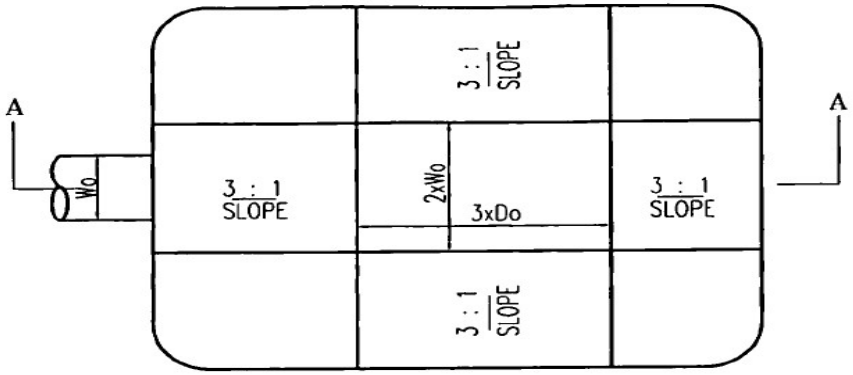
Scour Hole Design

Project:	WEH
Job #:	-
Location:	West Orange, NJ
Design Storm:	25-YR
Computed By:	ASM
Checked By:	PWA
Date:	6/12/2024

Discharge not in Basin, Therefore Tailwater is less than 0.5 x Do

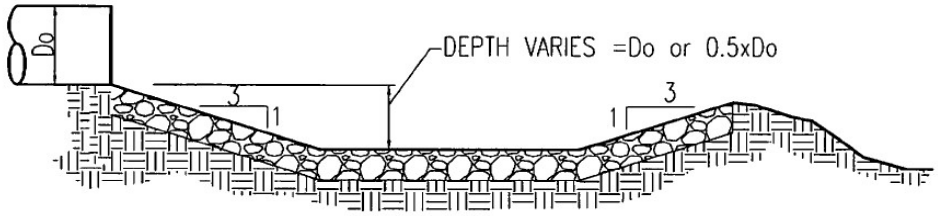
Discharge Point	PP-9
Q (25-yr storm cfs)	**0.61**
Inside Height of Outlet Culvert, Do (in)	**12**
Inside Height of Outlet Culvert, Do (ft)	1.0
Tailwater (ft), Tw	0.20
Length of Apron, L (ft)	**3.00**
Width of Culvert, Wo(in)	**12**
Width of Culvert, Wo(ft)	**1.0**
Width of Apron, W(ft)	**2.00**
Where Y = 1/2 Do, Y(ft)	**0.500**
Median Stone Diameter, D50 (ft)	**0.03**
Where Y = Do, Y(ft)	**1.000**
Median Stone Diameter, D50 (ft)	**0.02**

Note: Use D50 of 6 inches minimum



PLAN

Equations used:
L=3*Do
W=2*Wo
Tw=0.2*Do (If Tw cannot be computed)
Where Y=1/2 Do
D50=(0.0125/Tw)*(q^1.33)
Where Y=Do
D50=(0.0082/Tw)*(q^1.33)



SECTION A–A

Notes:
1. The use of scour holes shall comply with county or local ordinances which would restrict the use of such devices due to the possible problems with mosquito breeding.
2. No bends or curves at the intersection of the conduit and apron or scour hole will be permitted.
3. There shall be no over fall from the end of the apron to the receiving material.
4. The thickness of the riprap lining, filter, and quality shall meet the requirements in the Riprap Standard Section of the Standards for Soil Erosion Control in New Jersey.

ANDERSON CONSULTING SERVICES
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(973) 975-0703

Date: 6/11/2024
Project: WEH
Project No: -

Calculated By: ASM
Checked By: PWA

Conduit Outlet Protection Calculations

Rip Rap Pad # PP-11

Design Parameters:

Design Storm Flow for 25 Year, Q	3.29	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	0.25	ft

Apron Dimension Calculations:

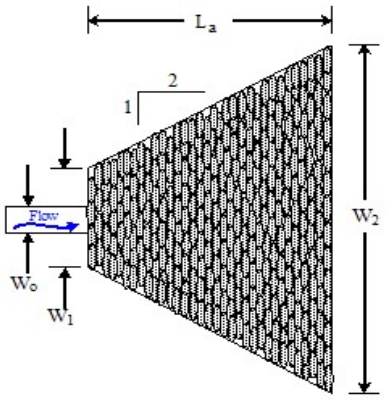
Unit Dicharge, $q = Q/D_o$ = 2.63 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = 12.99 ft or **L_a = 13 ft**

Width, $W_1 = 3W_o$ = 3.75 ft or **W_1 = 4 ft**

Width, $W_2 = 3W_o + L_a$ = 16.74 ft or **W_2 = 17 ft**

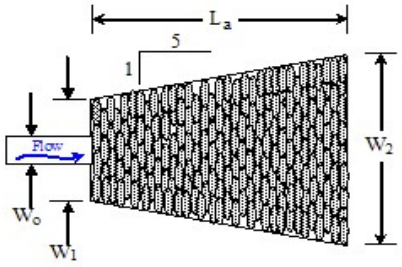


- **Case II: $TW \geq 1/2\ D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = **L_a =**

Width, $W_1 = 3W_o$ = **W_1 =**

Width, $W_2 = 3W_o + 0.4L_a$ = **W_2 =**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 3.48 in **d_{50} = 6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.